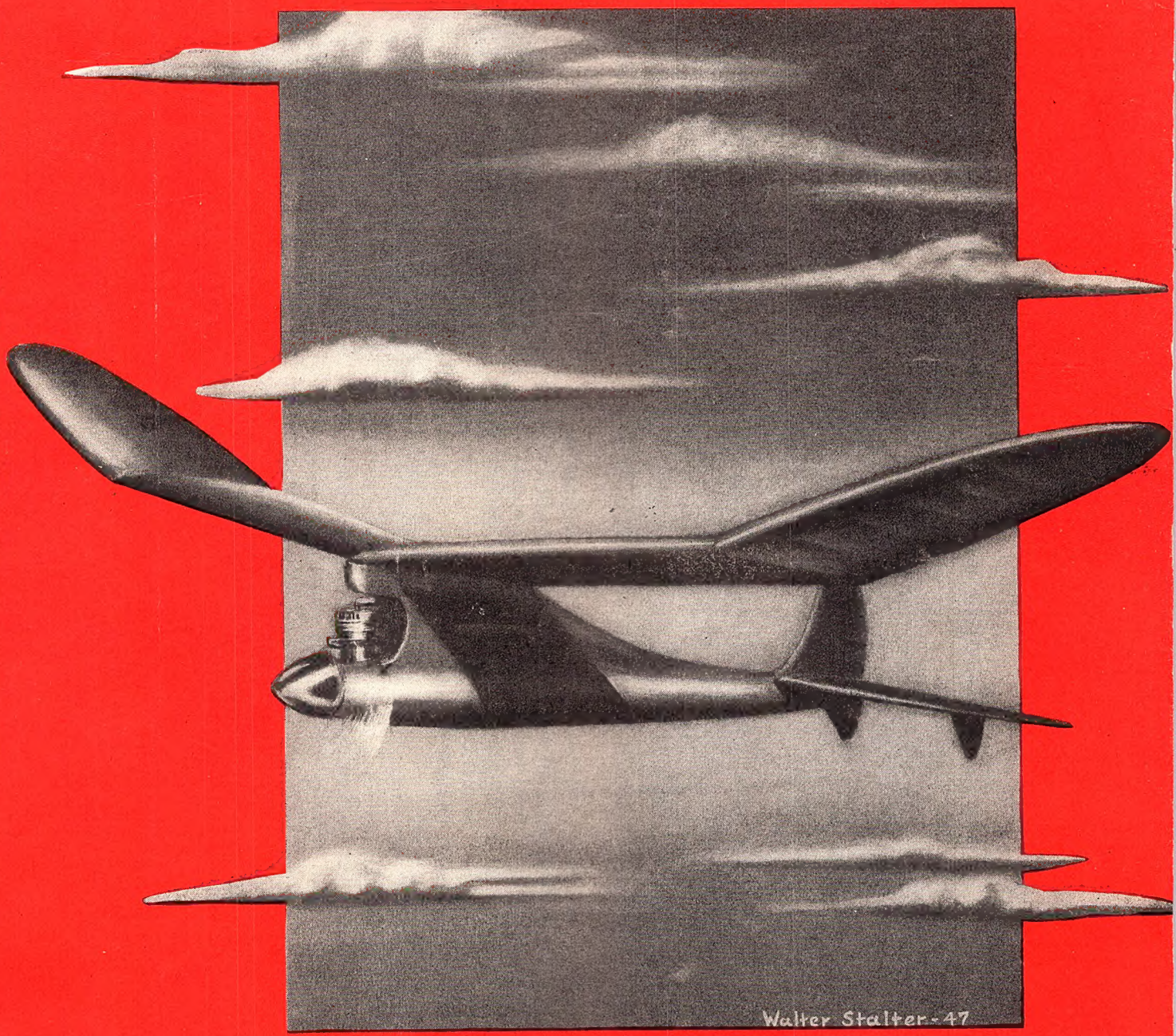
THE MODEL CRAFTSMAN

MARCH 1947

25 CENTS



Powerhouse in this issue

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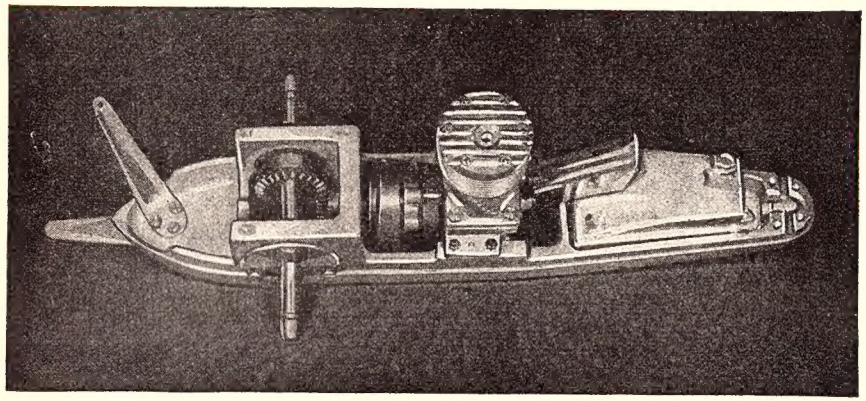

The Speedway Pacemaker will be sold completely assembled, and will include the chassis, body, all wheels, axles and tires, fuel tank, coil, switch, condenser, special crankshaft, gear and flywheel. The car is set up 100 per cent on precision ball bearings. The electrical equipment is assembled compact and as a unit, and bridle brackets are included. The engine and battery pack are the only items necessary to complete the car. *As listed . . $55.00*

We have found that a good many of you fans are not in a position to mount an engine in a race car even though the car has been assembled to that point. This type of hobbyist wants a car that can be taken out to the track for a run without any further construction necessary. We can furnish you with a complete car with either a Hornet or a McCoy engine installed, ready to set on a track, and able to compete with the best of custom made cars.

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One other plan is available, whereby, if you wish, we will mount your "pet" Hornet or McCoy engine in a new Speedway Pacemaker to give those few extra miles per hour. Under this system you will receive the car complete with your own engine mounted and ready for the track. *As listed . . . $85.00*

SEE THE MEANING OF "COMPLETE":

Extras included with the Speedway P. are as follows:

1. Special Crankshaft
2. Fuel Tank
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7. Carburetor Air Ram
8. Bridle Wire
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10. Battery Clamp
11. Condenser
12. Ignition Switch
13. Switch Bracket

—and all necessary fasteners and hook-up materials.

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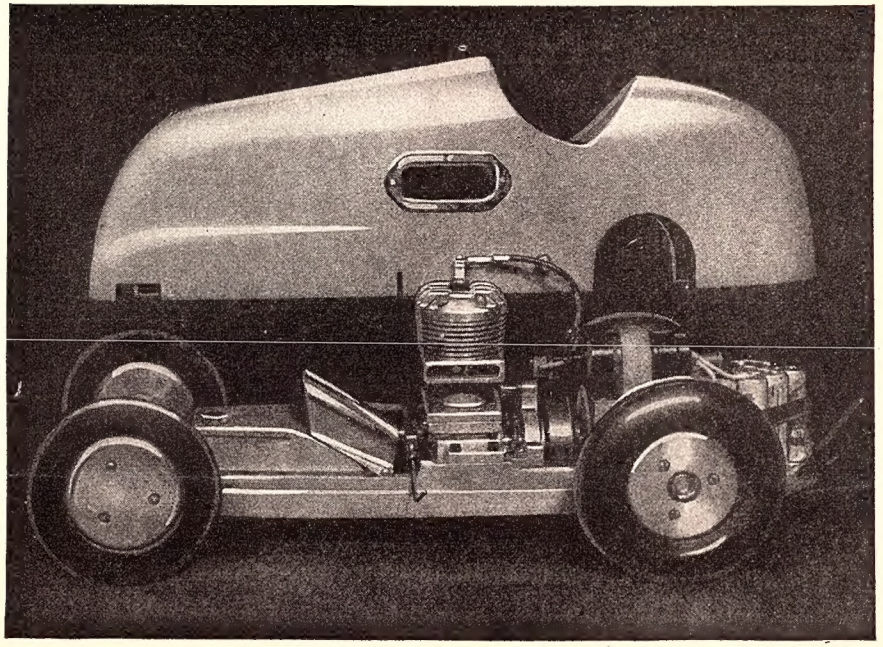
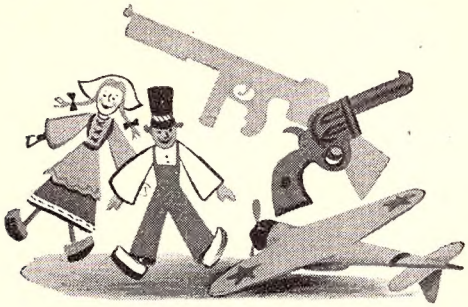


Guns, Dolls, Planes



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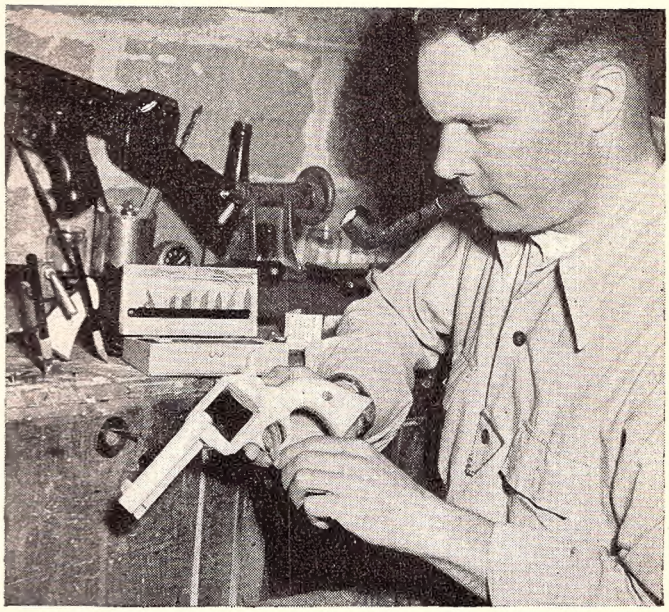
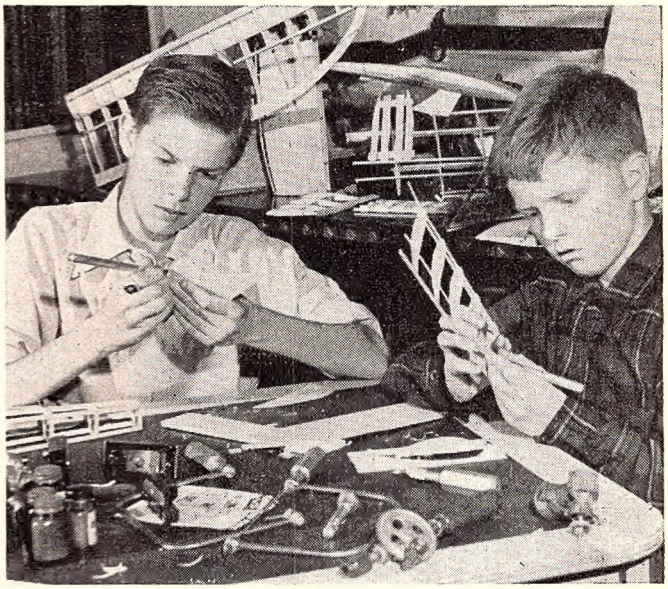


ROBERT O'BRIEN of Madison, Wisconsin, says "I make better models (his hobby's guns) in one-third the time, and always have a sharp edge when I need it."

VERONICA R. STEVENS of Riverside, Illinois, made her "Paquita Dolls" hobby into a full-time business, for which she "uses X-acto tools daily and endorses them whole-heartedly."



DONNIE UHL of Great Neck, Long Island, has made more than fifty scale-model planes. He and his pal Craig Jennings say "X-acto's thought of everything a model-builder needs. That 'Big Shot' Tool Chest is swell!"

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WRONG DOPE

In reading over the very timely and interesting article in January MC on Centrifugal Force by R. J. Hoffman, I am writing to point out what I believe to be an error, either typographical or otherwise, where Mr. Hoffman says: "For example, if the operator holds the line at a four-foot level and the line is fifty feet long, the model will leave the ground at a speed of 30 MPH; it would take at least 45 MPH if the line is 75 feet long."

According to my figures, these speeds are quite far from the speed required to lift the model off the ground, without wings. With 50 foot lines, I figure it would take some 97 MPH and with 75 foot lines, some 145 MPH. The height of 4 feet on a 50 foot line makes a slope of 1 in 12½ and by the good old "Parallelogram of Forces" law, it will take a horizontal force of very close to 12½ lbs to combine with the restraining force supplied by the wire to give a resultant of 1 lb in a substantially vertical direction. Such a force requires a speed of 97 MPH on a 1 lb model, i.e. a load factor of 12.5 as per Mr. Hoffman's article.

I would not have mentioned this had I not had a vision of some sturdy line swinger rolling up his sleeves and trying to get his wingless creation off the sod and wondering why it did not show some signs of lifting after the 30, 40, 50 mile mark had been reached.

In closing, let me tell you how much I have enjoyed the semi technical articles of late on Engines, Coils, etc. They fill a much needed source of information for the serious modeler. . . . *W. T. Thomas, Daytona Beach, Fla.*

KEEP UP THOSE BOATS!

I read Bob Graham's page on model boats in your last issue, and I think it would be swell if you kept it up. It is pretty hard to find anything about boats anywhere else. If there was more information about them, I think more people would become interested. . . . *N. Deniston, Los Angeles.*

MORE POWER TO YOU!

Thanks for your article on model boats by Bob Graham in your last issue. Your magazine is the first since the war to carry such an article.

All the "Hydroplane fiends" are back, and materials available again. Now a medium of idea exchange is needed. Up to now, there has been no magazine for the model boat enthusiast.

We here in Fresno are eagerly awaiting your next issue. . . . *D. Ellis, Fresno, Calif.*

THE MODEL CRAFTSMAN

Including "THE MODELMAKER"—Est. 1924 and MINIATURE RAILROADING Magazine

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MARCH, 1947 **Vol. 15, No. 10**

I OBJECT!

Just to keep the records straight, I'd like to inform C. E. Pearce (Safety Valve, Feb. issue) that I've never heard of any P. R. R. Class L-1-5 or B-6-5, but they do have many L-1s and B-6s (2-8-2 and 0-6-0).

The small letter *s* meaning that the locomotive uses superheated steam. This system was discarded around 1925 when at that time mostly all Pennsy engines were being so equipped. . . . *G. Abere, Jr., Woodhaven, N. Y.*

NO DOUBTFUL ADVERTISING

I should like to say in passing that I enjoy the MC tremendously. It is one of the few, if any, magazines which seem to operate with the idea of trying to help the modeler, rather than a *portfolio of somewhat dubious advertising.* I'd also like to add my thanks to the many others for your surveys. They are not only interesting but tremendously helpful.

One small beef, why not print the results of U-Control meets in similar manner as race car results—ship, engine and speed? I also wonder if the MC is going to keep abreast of the new engines being offered for sale, such as the "Howler" in the Jan. issue? I've also wondered how some of the custom-built engines, such as the R. B. Special, Hassad, Blakely, Ball and others compare with the standard stock engines. I also hope the MC would run an article on speed fuels and one on "souping" up of stock engines. . . . *R. J. Mechin, Jr., Edwards, N. Y.*

(We appreciate your fine comments. It has always been our policy to discourage undesirable advertising so our readers will not be misled. Other surveys and tests are now being made, so look for them in the near future. . . . Ed.)

HAIL TO A FUTURE MODELER

An expiration notice was recently sent to Dick Russell, one of our subscribers and the following interesting letter received: "Dick isn't old enough to read yet, so he didn't know what it was all about. No grown-up gets more from reading the Model Craftsman than Dick gets out of reading the pictures. His uncle is accumulating several hundred feet of roadbed, rail, O-Gauge trains, etc., until the day when a real set-up can be built. No one could be more enthused than five year old Dick Russell. The line will be registered as the Hemet & San Jacinto RR. . . . *C. Searl, Hemet, Calif.*

WANTED—MOTOR INFORMATION

I like your articles on how-to-build railroad cars and locomotives in the MODEL CRAFTSMAN. I have built some of these cars that have been shown so far. I am now starting on locomotives and would like to see diagrams of motors for HO locos. Can these be acquired? To think that everything else pertaining to trains are printed and no diagrams of the power supply. I think other fellows as well as myself would enjoy an article on motors alone. . . . *H. L. Holleman, Holmes, Pa.*

ARE THESE NECESSARY?

I have noted an improvement in your mag of late. While primarily interested in boats, I enjoy reading construction articles on railroads, race cars and live steamers, but not the *cardboard and glue* articles on slaughter houses and outhouses, etc. . . . *E. F. Schroeder, River Edge, N. J.*

FRONT COVER

Artist's conception of Dick Korda's "Powerhouse." See page 8 for complete plans for this champion model, built by none other than the "old Champ himself."

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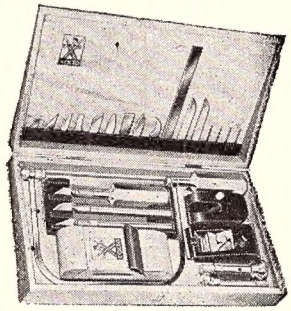

No. 85 X-acto Tool Chest—3 all-metal knives; assortment of blades; saw; sander; stripper; planer, 2 drill holders; 10 drills; 6" steel ruler; complete in wooden chest, $12.50. (Illustrated)

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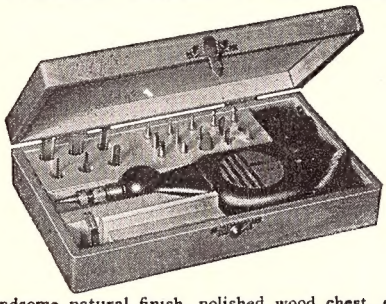

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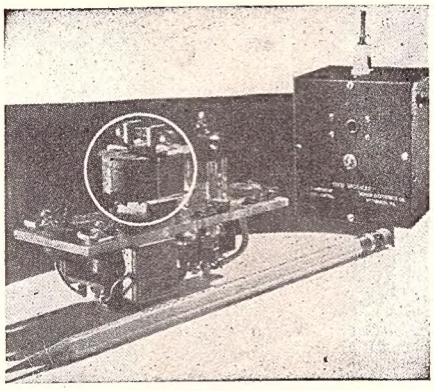

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RAILROAD CLUB NEWS

BALTIMORE, MD. Tough news hit the Baltimore Society of Model Engineers at their last meeting, when their new president, Mr. Meyer, informed the boys that the "jig was up"—I mean their lease was up come May 31st and it either meant more rent than they could afford or change their quarters. This seems to be the new themesong for all clubs nowadays. Guess that housing shortage is really "putting on the screws"! Realizing they can't afford the increased rent, a choice of three new locations is already in mind with the added possibility of erecting their own personal building as their exclusive headquarters.

An interesting item just appeared in their club paper, "The Switcher", wherein their editor pointed out past errors in construction of their layout. We quote, "The model railroads we construct look like real railroads if we stand off to one side, but get up close. Look at that switch. Look at that roadbed. Look at any one part of the layout. Where is the detail? Yes, that switch looks OK, and trains run over it smoothly, but what is wrong? Did you ever see a switch on the main line where ballast was up to the top of the ties at the points? What's wrong with the roadbed? Where's the enter ditch? Should it be level with the ties? and so on". Good point, and well taken, fellas. Keep this in mind when your new layout goes up!

With a change in location staring them in the face, all Model Clubs are asked to contact them at the following temporary address: THE SWITCHER, 3707 Frankford Ave., Baltimore 6, Md.

OAKLAND, CALIF. "All's not quiet on the western front", at least we can say this about the Eastbay Club. Judging from different reports heard and seen, the boys are really in their pitching for their coming "big show", the NMRA Convention on Aug. 15th to 17th. Their past policy has been to credit all members with work done on their layout, but this latest burst of activity has caused Editor Phil Johnson to frankly give up trying to determine "WHO DONE WHAT and WHEN". Giving quite an elaborate description of what was literally ripped out of the old layout and replaced with superior workmanship, Editor Johnson hastens to inform everyone that this all comes under the heading of "Improvements". All this is being done to put on the best convention ever held. More power to you!

BRONX, N. Y. The Bronx Model Railroad Club, 1442 Williamsbridge Rd., operating "The Knickerbocker Line", is the oldest club on Manhattan Island, operating since 1937. New officers for 1947 are A. E. Jones, President; Don Bailey, Vice-Pres.; Ed. Wiggers, Treas.; D. K. Soons, Sec. Meetings are held

(*Continued on page 50*)

WATCH THE

POLK-a-DOTS

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DON'T BUY A POWER PACK if you have an old toy train transformer lying around. Almost any Lionel or Amer. Flyer transformer can be combined with a rectifier to make a power pack capable of operating one or more locomotives. For example, a transformer of 100 watts capacity when combined with our 4-amp. rectifier will operate 4 HO locomotives simultaneously. Each rectifier comes complete with simple wiring diagram.

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Circuit breakers, 5 amps., ea. ..... .50

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Single arm model with bulb..... 1.75
Double arm model with bulb..... 2.50

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Don't discard your 6-volt motors because everything is now 12 volts! Rewind 'em! Kit contains necessary wire and easily understood instructions for rewinding all popular 6-volt motors to 12 volts..... .55

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Interlocking tower kit..... .60
Cattle pen kit 1.00
Kitchen car kit, less trucks..... 1.50
Die-cast figures, 9 passengers..... .40
6-pc. baggage, boxes, etc. ..... .25
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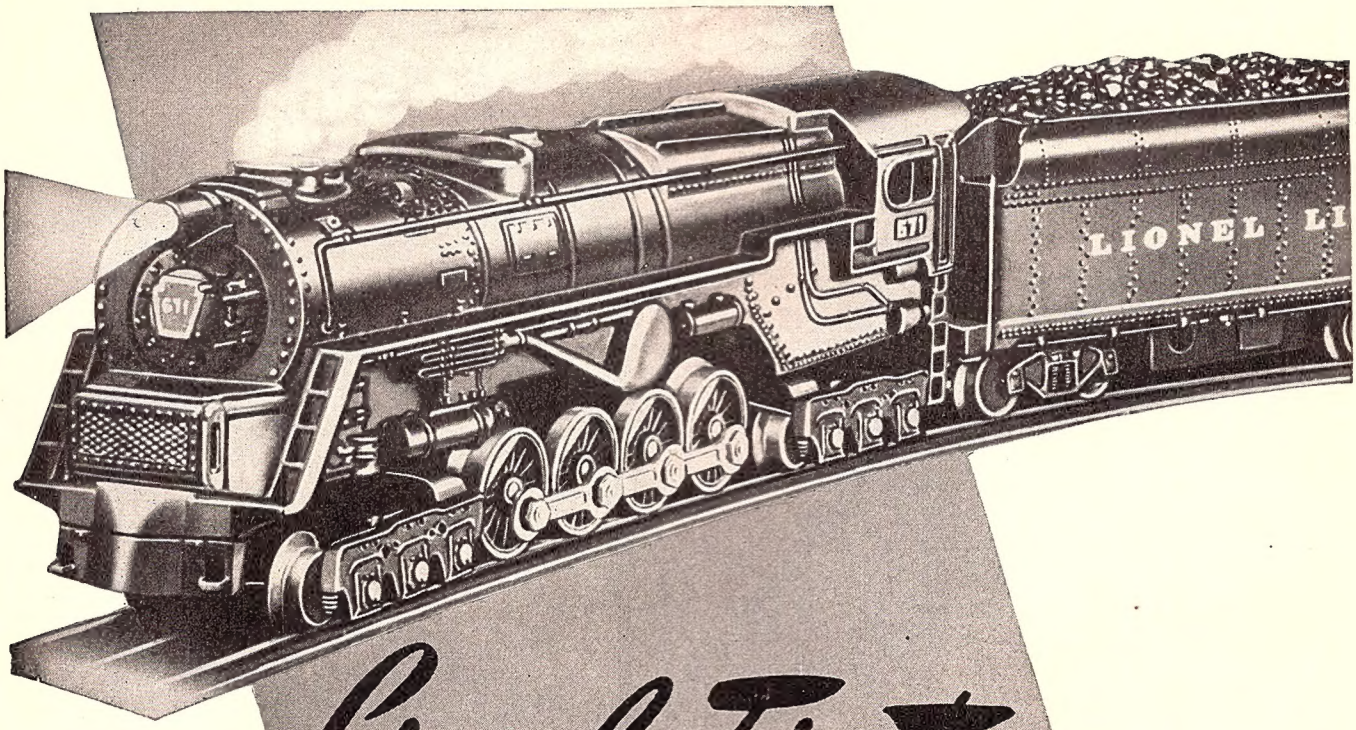

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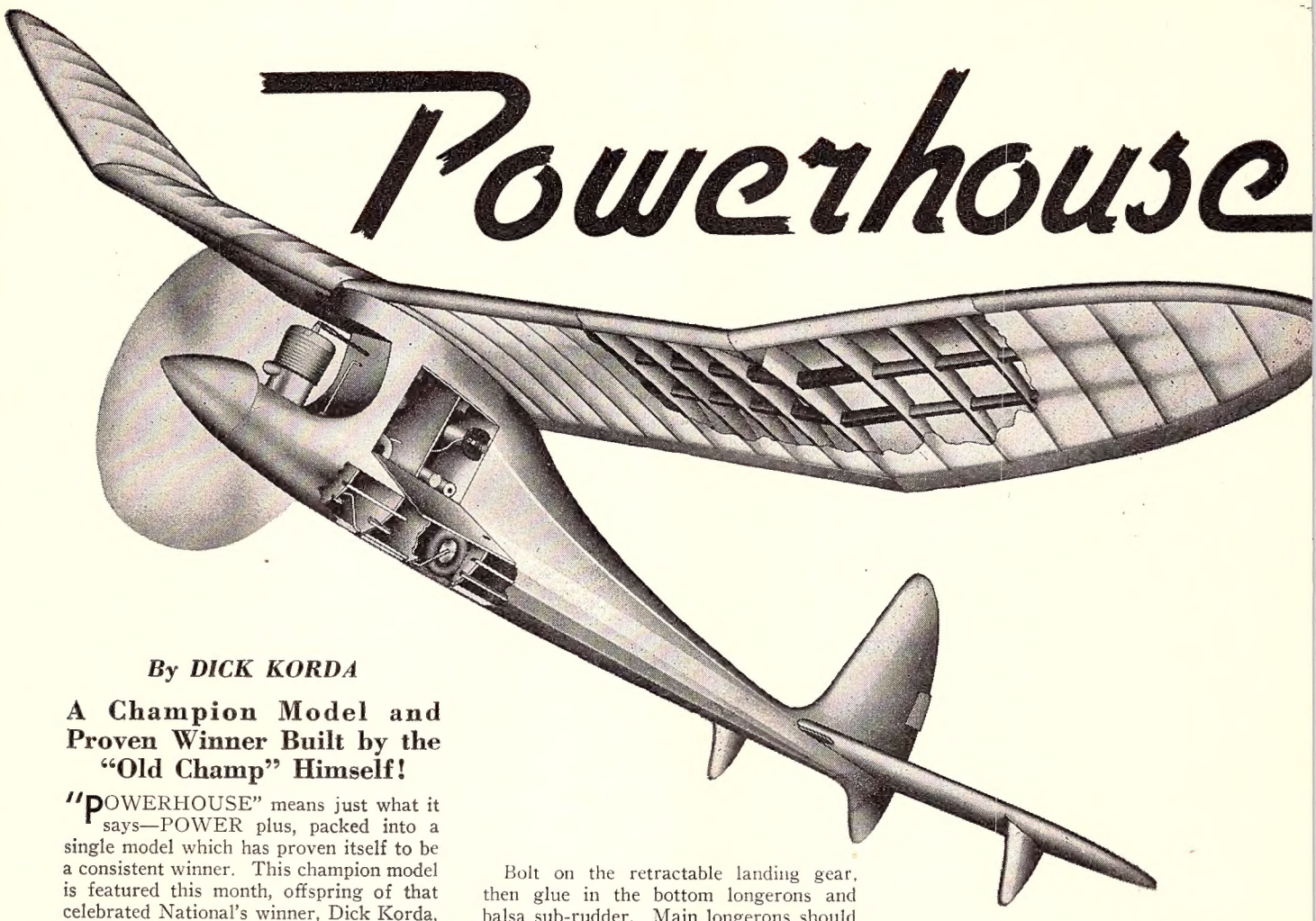
Powerhouse



By DICK KORDA

A Champion Model and Proven Winner Built by the "Old Champ" Himself!

"POWERHOUSE" means just what it says—POWER plus, packed into a single model which has proven itself to be a consistent winner. This champion model is featured this month, offspring of that celebrated National's winner, Dick Korda, himself a grand old champion! The Class B version of his Powerhouse design is described here, with a long list of enviable national records established by this ship in the minds of all model builders. Outstanding among these records is that established at the Third Contest held July 28, 1946, at Battle Creek, Mich., sponsored by the Aviation Committee and Battle Creek Exchange Club. Powered with a Delong "30," a flight time of 35 minutes, 44 seconds was turned in on first flight, landing 100 yards away from take-off. Second flight was 21 minutes, 5 seconds, lost out of sight, giving a total time of 56 minutes, 49 seconds!

The body is made up of the popular "crutch" type. Frame is built up around two heavy longerons which act as center line from which all incidence, thrust and stabilizer settings are measured.

Lay out two longerons on top view of the plans and splice on cross pieces and hardwood motor mounts. The motor mount should have approximately four coats of cement at the spliced section, allowing each coat to dry completely. While the crutch is drying, cut out remainder of formers, top curved longeron and all wing and tail ribs, plus tip outlines for wing, stabilizer and rudder. All formers and longerons should be made of fairly hard balsa so the finished ship will stand up under the terrific beating of contest flying. First cement in place the fire wall, the former under the trailing edge and the former just ahead of the stabilizer. Now add the curved top longeron and fit in the remaining formers.

Bolt on the retractable landing gear, then glue in the bottom longerons and balsa sub-rudder. Main longerons should be notched sufficiently to allow the ¼" flat balsa stabilizer support to come flush with top of longeron. This will allow the stabilizer to set at 0° incidence. Now set your engine in position and drill mounting holes. Solder mounting nuts to a ¼" wide metal plate and bolt engine in position with metal plates under hardwood mounts. Give them a good coat of cement and allow to dry completely before removing engine.

Fill in between bottom longerons with scrap balsa entirely back to and including landing gear well. Use ¼" flat balsa from nose to firewall, as this is the spot that will take rough landings. Make certain a ¼" drain hole is put into the bottom of the body just ahead of the firewall to keep excess gas from pooling and catching fire.

Timer and electrical system should now be installed on or as close as possible to main longerons to keep low center of gravity. Plank upper part of body (under the wing) with 3/32" balsa. On the opposite side of the exhaust stack, build up a door for access to batteries and ignition.

It is most important that you use several layers of cement on all joints for a resulting strong fuselage that will be very hard to crack up. Cover the body with grain of paper running lengthwise.

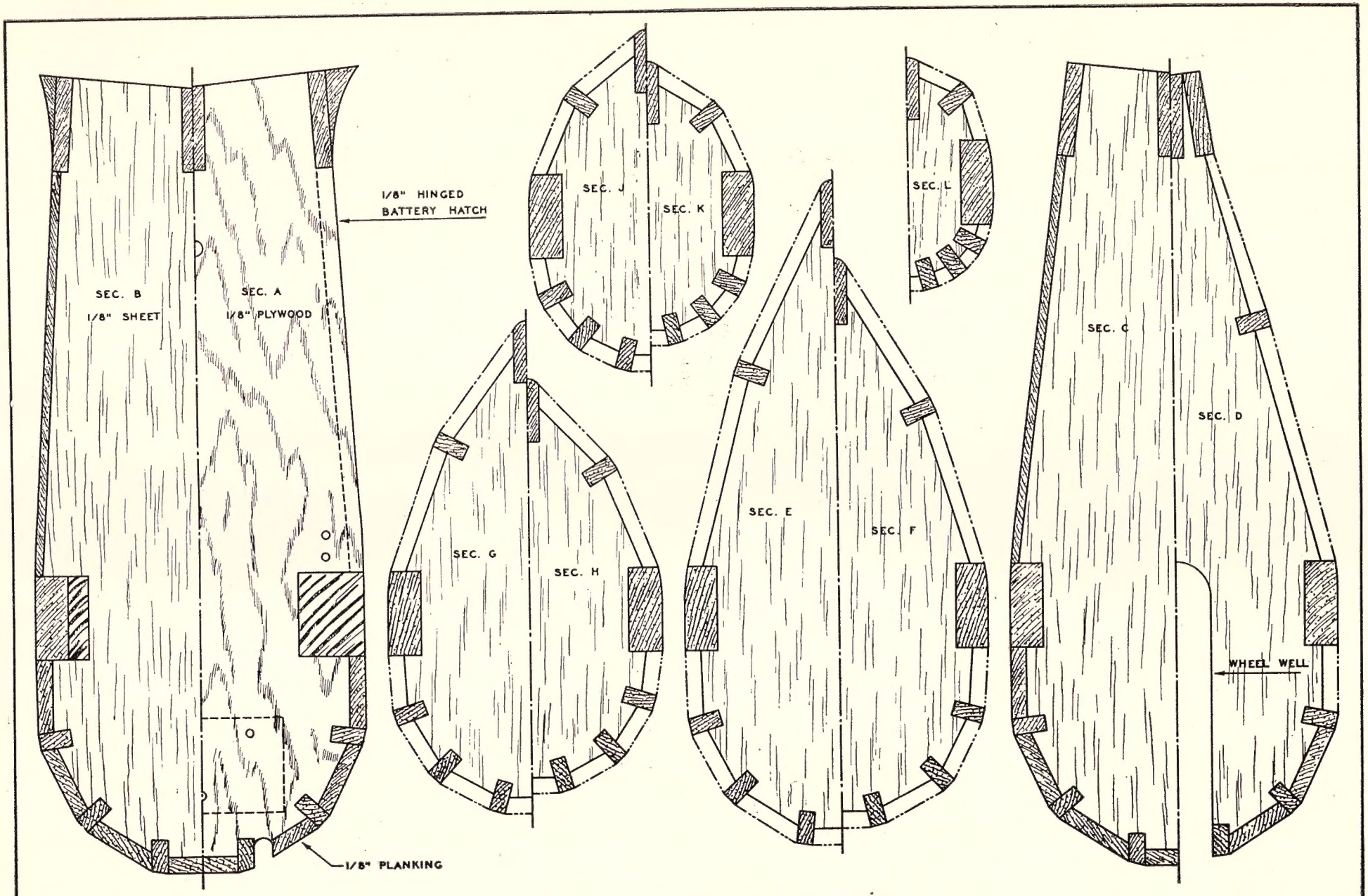
Both the stabilizer and rudder should also be made of a fairly hard balsa to prevent warping, one of the biggest headaches in model building. Lay out entire stabilizer outline and cement in the ribs, making certain to glue in triangle gussets at the trailing edge. These take only a short time to glue in place, but keep the trailing edge from warping down.

The two outboard sub-rudders are cemented in, after the stabilizer has been covered. Rudder is made of 3/16" stock. Make certain you install the small movable rudder tab before covering rudder! This tab is very important for adjusting and should not be omitted. With rudder and stabilizer covered, slit paper on stabilizer and glue in the rudder, using plenty of cement. Put a thin layer of cement along each side of the rudder where it touches the ribs. Glue in the half-round dowel wing locks at leading and trailing edges. These are necessary to keep stabilizer at same settings for each flight. For lining up stabilizer at right angles to the body, place a pin in center of body at trailing edge of wing; tie a string to the pin and check a spar at each end of stabilizer.

Different airfoils in the wing and stabilizer were tried until the right combination was reached. With the correct amount of incidence and proper amount of down and side thrust, this model can climb absolutely straight up without spinning or looping.

The entire wing is laid out at one time with the spars in place. The two tip sections are then blocked up, the spars, leading and trailing edges cemented firmly in place with proper amount of dihedral. Block up the two center panels and cement. Give all dihedral joints and spars two or three coats of cement, and there

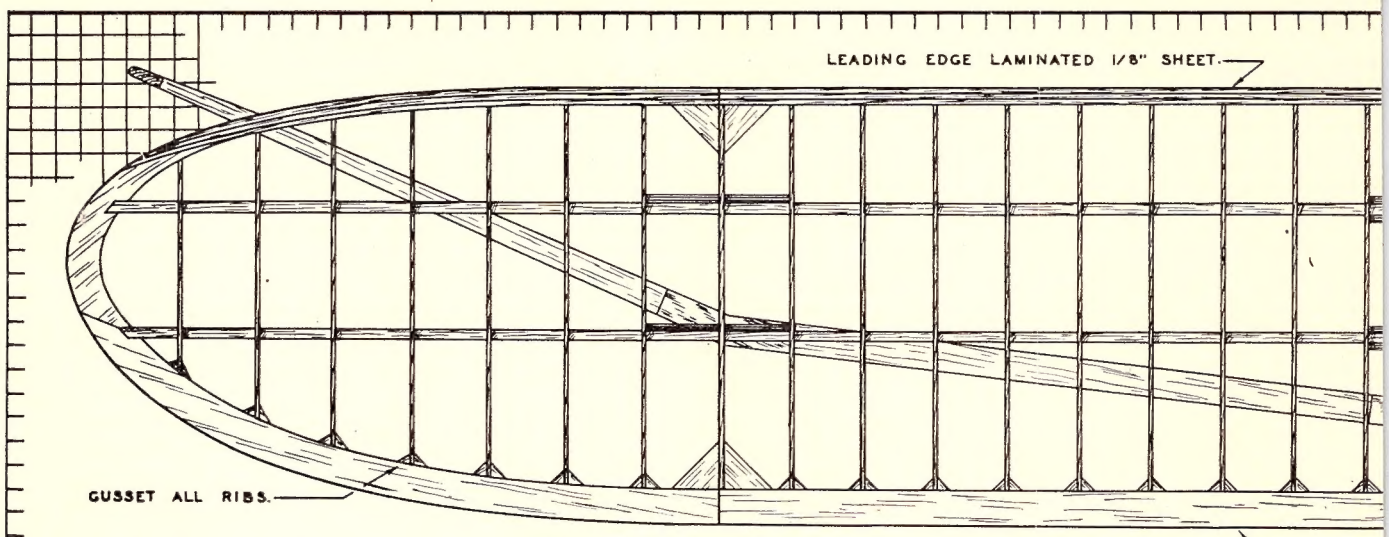
(*Continued on page 41*)

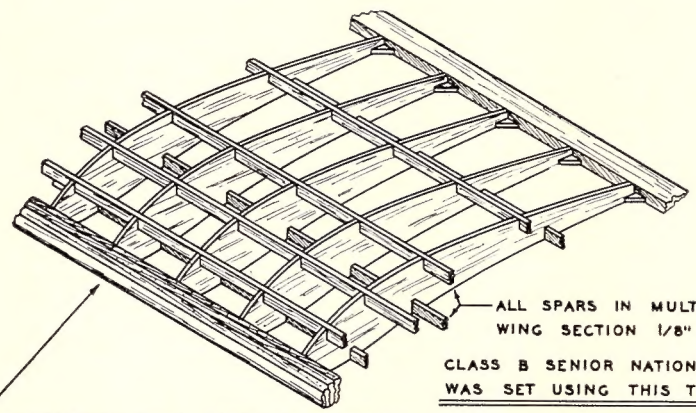


POWERHOUSE

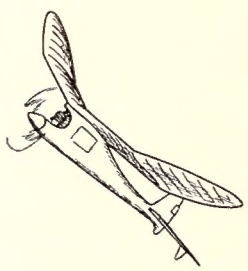
SECTIONS B THROUGH L, 1/8" MEDIUM SHEET BALSA.

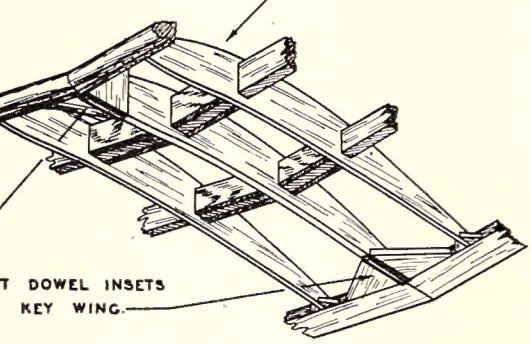
SCALE - FULL SIZE | DJM

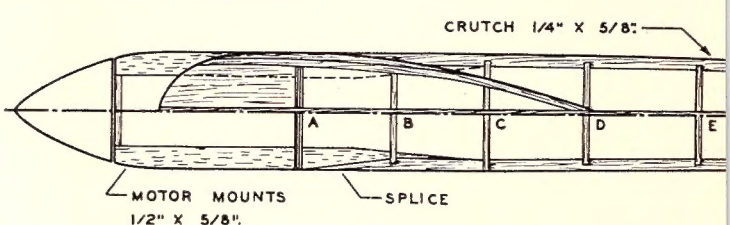


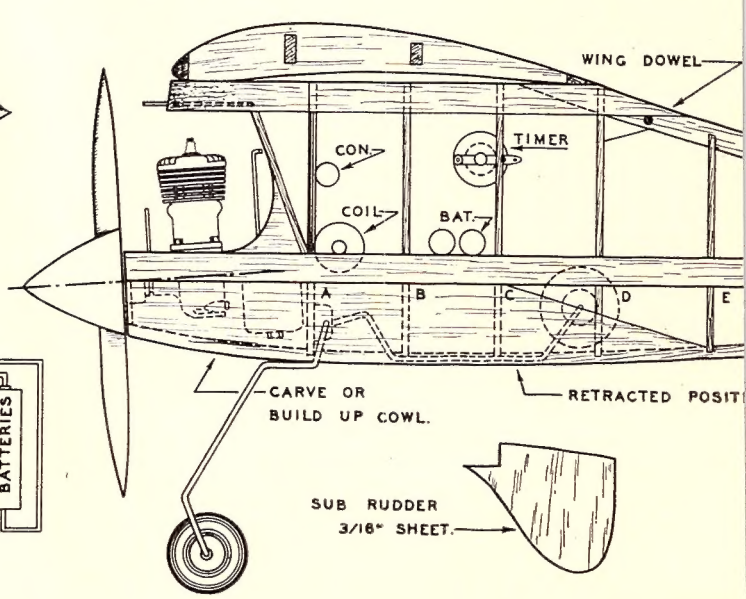


CLASS B SENIOR NATIONAL RECORD WAS SET USING THIS TYPE WING.

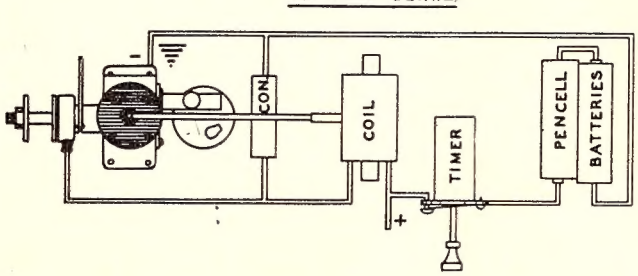


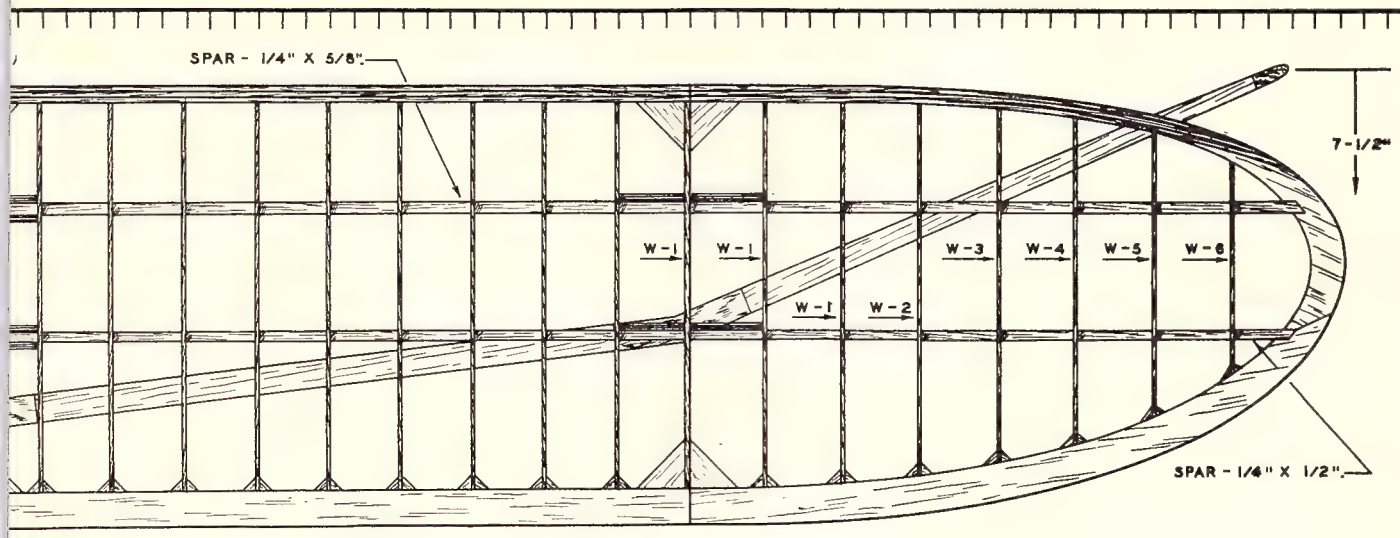


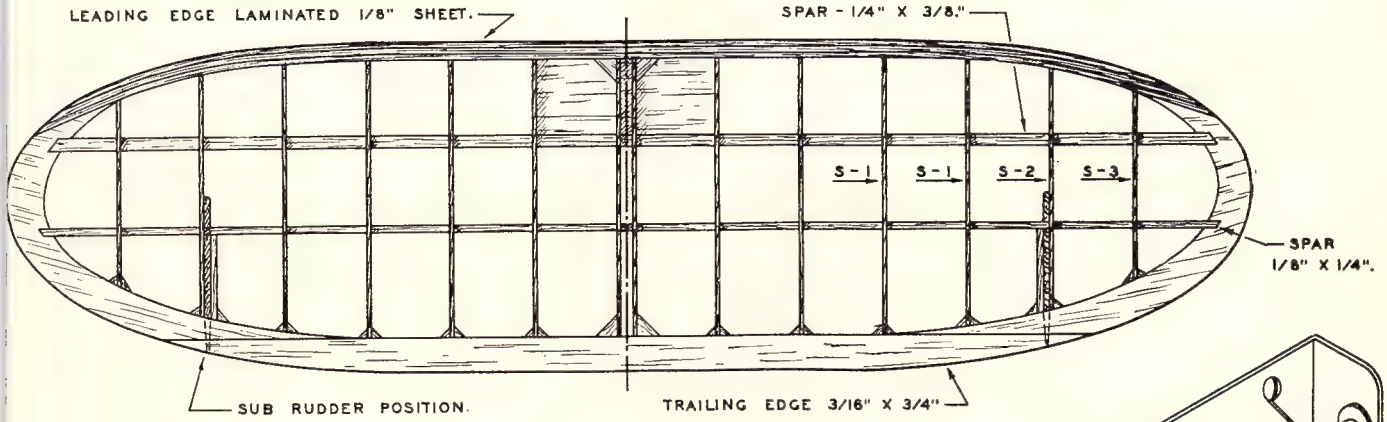


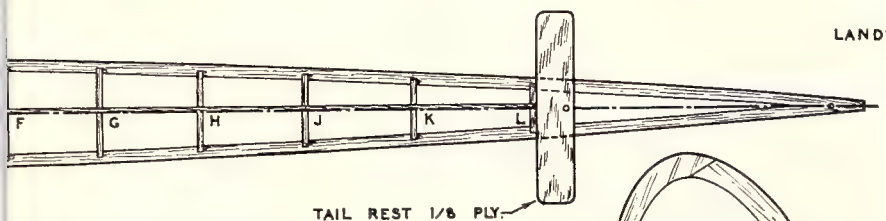


IGNITION DETAIL.

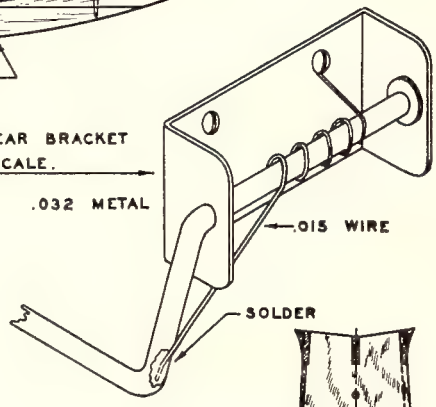




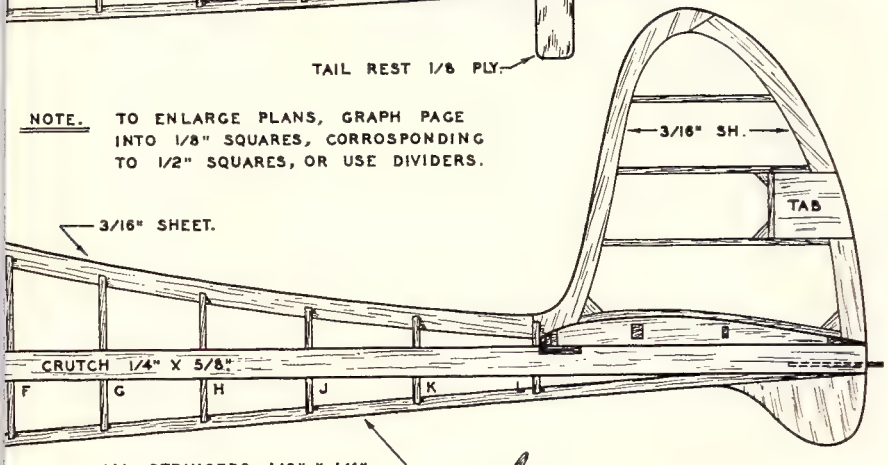


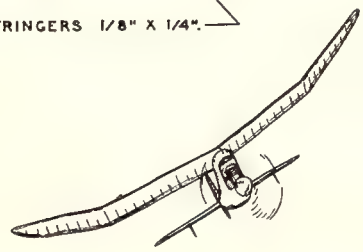


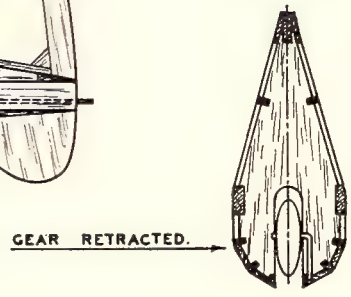
TAIL REST 1/8 PLY.

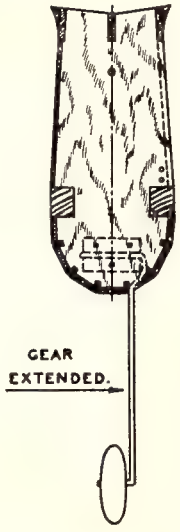


NOTE. TO ENLARGE PLANS, GRAPH PAGE INTO 1/8" SQUARES, CORROSPONDING TO 1/2" SQUARES, OR USE DIVIDERS.

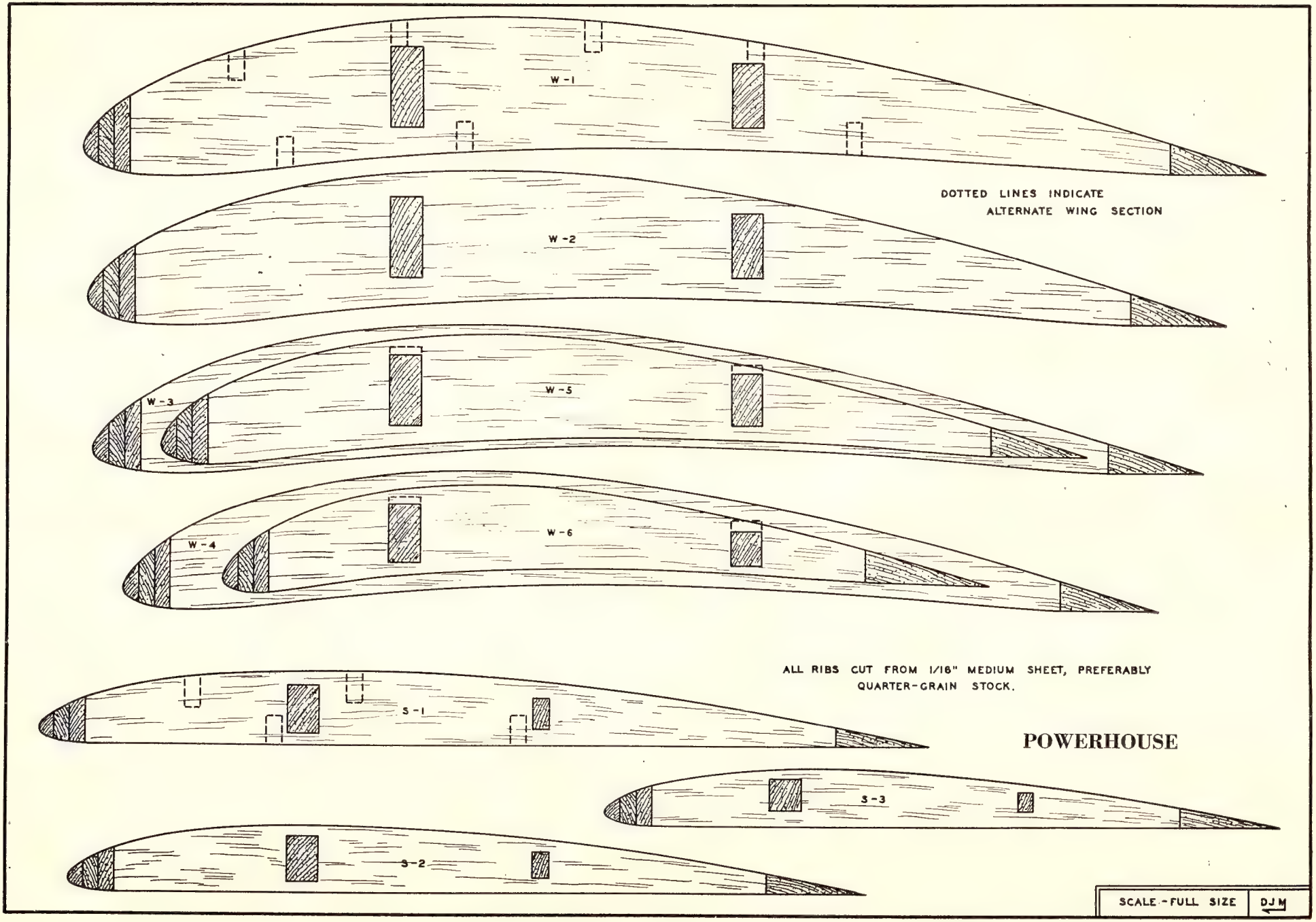




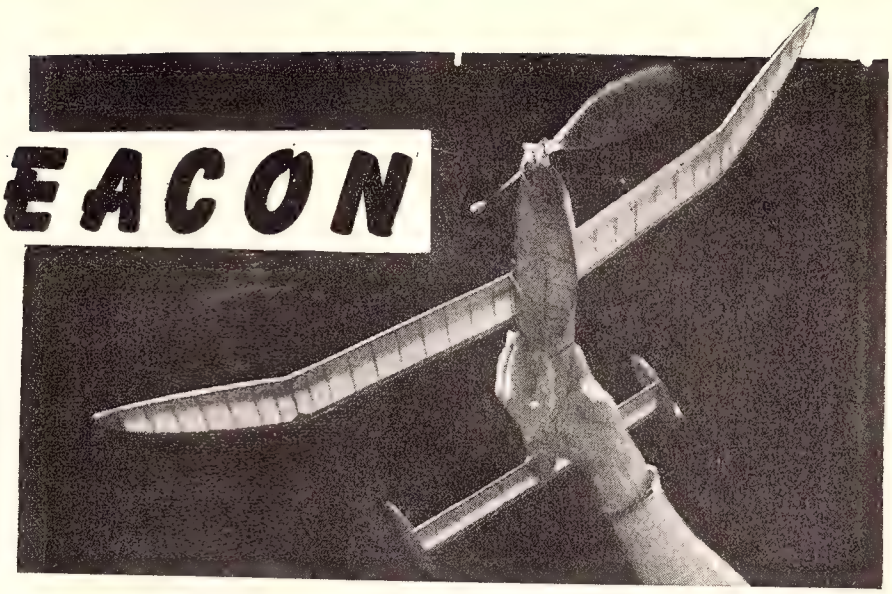




1/4 SCALE CLASS "B" AREA - 511 SQ." WGT. 36 OZ.	**"POWERHOUSE"** DESIGNED BY DICK KORDA DRAWN BY DON MCGOVERN


W - 1
DOTTED LINES INDICATE
ALTERNATE WING SECTION
W - 2
W - 3
W - 5
W - 4
W - 6
ALL RIBS CUT FROM 1/16" MEDIUM SHEET, PREFERABLY
QUARTER-GRAIN STOCK.
S - 1
POWERHOUSE
S - 3
S - 2
SCALE - FULL SIZE
DJM

THE DEACON



By PAUL DEL GATTO

STABILITY used in conjunction with high performance and low drag are the three prerequisites of a good contest performer, but are seldom attained. Knowing this combination to be rare, I undertook to design such a model, small in size yet able to compete against models of much greater wing area.

Three models have been made to date, the first employing a Clark Y airfoil in the wing with an aspect ratio of approximately eight to one. Against better judgment, a two-bladed folder was used. Performance was above average, but it could still be improved.

My second attempt employed the original Davis airfoil set at two degrees angle of incidence, in conjunction with a one blade folding prop. The radical increase in performance was so noticeable you never would have known them to be of the same basic design.

The third model in which the design reaches peak maximum performance, the changes made were mainly to induce a soaring glide without decreasing the rate of climb. Aspect ratio was increased to roughly ten to one, with a Davis airfoil set about four degrees wing incidence. Instead of using the Clark Y in the stabilizer with its full thickness, it was cut down to 90% of the original to decrease the drag slightly.

An interesting note is the fact that the Davis Airfoil at such a high angle of incidence provides greater lift and less drag than most airfoils now in use, set at much lower angle of incidence.

All of my models are tested in the evening when it is fairly calm and thermals few and far between, permitting a thorough cross-examination of the model's performance. When adjusted, the model turns in a consistent average of two minutes plus, on about 600 winds. The motor is capable of taking 900/1000 winds. Something else that will astound you is the terrific rate of climb and the altitude it will obtain. Don't let the scarcity of rubber be a hindrance to you. The rubber used on all of these models had a good four years behind it, all of which had been put to previous use.

FUSELAGE: Scale up the fuselage top and side views, using dimensions given. Basic framework consists of 3/32" hard balsa for longerons, cross braces cut from medium stock.

Formers for the belly are traced and cut from 3/32" medium sheet. Assemble the three fuselage formers together as one unit. When dry, fit it on the bottom of fuselage, using nose former and horizontal members at stations F and G. Apply diagonal and cross braces necessary. Fill in nose with 3/32" soft sheet as indicated. Rear fillets through which motor dowel is placed is made from 3/32" hard stock.

When covering fuselage, cover two sides and bottom first, then proceed to give it two coats of dope inside the fuselage. This will help prevent tissue covering from deteriorating due to lubricant used on the rubber. Now cover the top and give the entire fuselage three coats of dope, with one extra coat on the top. It is advisable to use rubber silkspan on the belly where there are fairly high curves.

Cut runners from hard stock as indicated, tapered to eliminate the use of incidence blocks which provide extra drag on the model.

WING: Explicit care should be taken in the wing construction, particularly when the design allows for maximum efficiency.

Ribs are cut from 1/20" medium sheet stock if available, otherwise use 1/32" hard stock. Cut out both trailing and leading edges. At this point, a certain laxity prevails when it comes to notching these parts, however consider the added strength and rigidity, with the almost total elimination of wing warpage.

Trace the gussets and cut out the required number of each. With the use of a full scale outline with rib positions indicated, pin the parts in their respective places. Start assembly with the right or left center panel as desired.

With the main framework constructed, the sheeting is applied to the ribs. Trim leading and trailing edges down to their respective sizes. Sand the wing surfaces lightly, removing all fuzz and nicks that may be on the wing surfaces. The tips are carved from two soft balsa blocks.

Before covering the wing, dope entire framework twice for added strength. Cover entire wing with tissue, spray with water and apply three to four coats of dope, depending on its consistency.

STABILIZER: Construction is similar to the wing, cutting the ribs from either 1/20" or 1/32" stock. Leading and trailing edges are cut to correct size and notched as indicated. Pin parts to the plans and insert 3/32" square hard spar.

After thoroughly dry, remove from plans and apply sheeting. Trim leading and trailing edges and sand lightly. Apply two coats of dope to framework, cover with tissue and spray with water. In most cases, two coats of dope will be sufficient. Fairing is constructed of 1/32" hard stock and covered with tissue.

RUDDERS: Constructed from 3/32" medium sheet stock and covered with tissue. Apply two coats of dope. Lightning holes are not indicated, but can be cut out with a little extra effort. Cut a tab in left rudder for adjustments as indicated by dotted line.

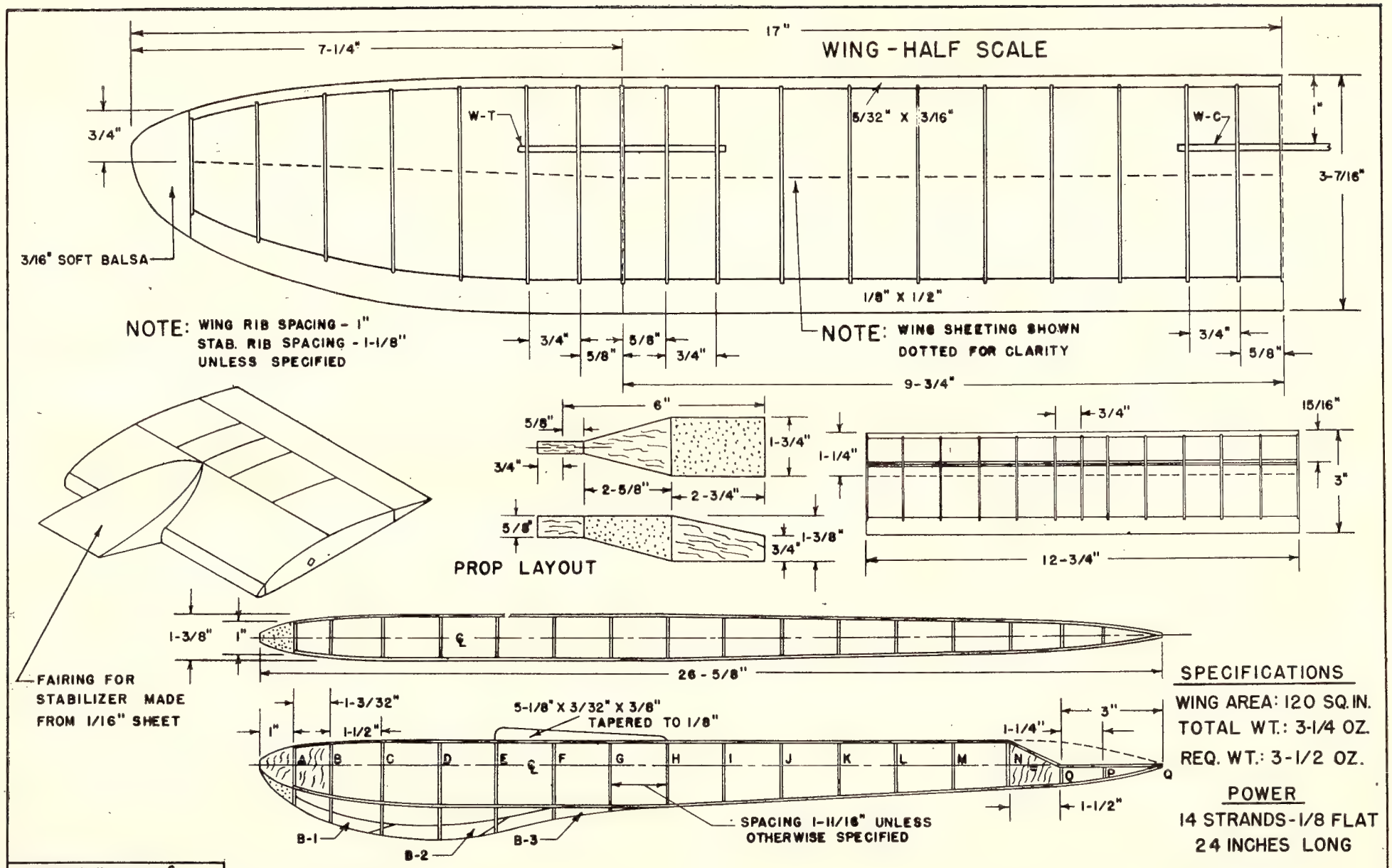
PROP ASSEMBLY: The entire assembly consists of a shaft, Jasco bobbin, nose block, ball bearing, spring tensioner and propeller. The prop is carved from a soft or medium block. Since a propeller is the contributing factor toward high performance, special care must be taken to carve it properly. Do not taper the tips to a nice point just because it looks attractive. Rather than this, merely round off the tips. This will allow you to maintain a minimum of area which will permit the model to rise to great heights before reaching its ceiling.

The nose block is constructed of very hard balsa to help withstand rough landings. The shaft is bent from .063 spring steel wire.

RUBBER MOTOR: This consists of 14 strands of one eighth, 24 inches long, attached to a dowel in the rear of the fuselage. Motor is put into place by removing tail surfaces. Green soap and glycerine in equal proportions is advised as a lubricant.

ADJUSTING: Before attempting to glide the model, balance just to the rear of the wing center. Slide wing either back or forward until reaching desired position. Glide the model; if it rides slightly nose high, the center of gravity is correct for flying. If it rides nose heavy, lengthen rubber motor slightly and just the opposite if it rides tail heavy.

Now keep applying turn with the tab until there is a noticeable effect when gliding the model. Put in about 40 or 50 hand winds and launch. The model should climb with a slight turn to the right and also glide to the right. If the turn is too shallow in the glide, apply more turn with the tab. Put in 75 to 100 winds and launch.



SPECIFICATIONS

WING AREA: 120 SQ.IN.
TOTAL WT.: 3-1/4 OZ.
REQ. WT.: 3-1/2 OZ.

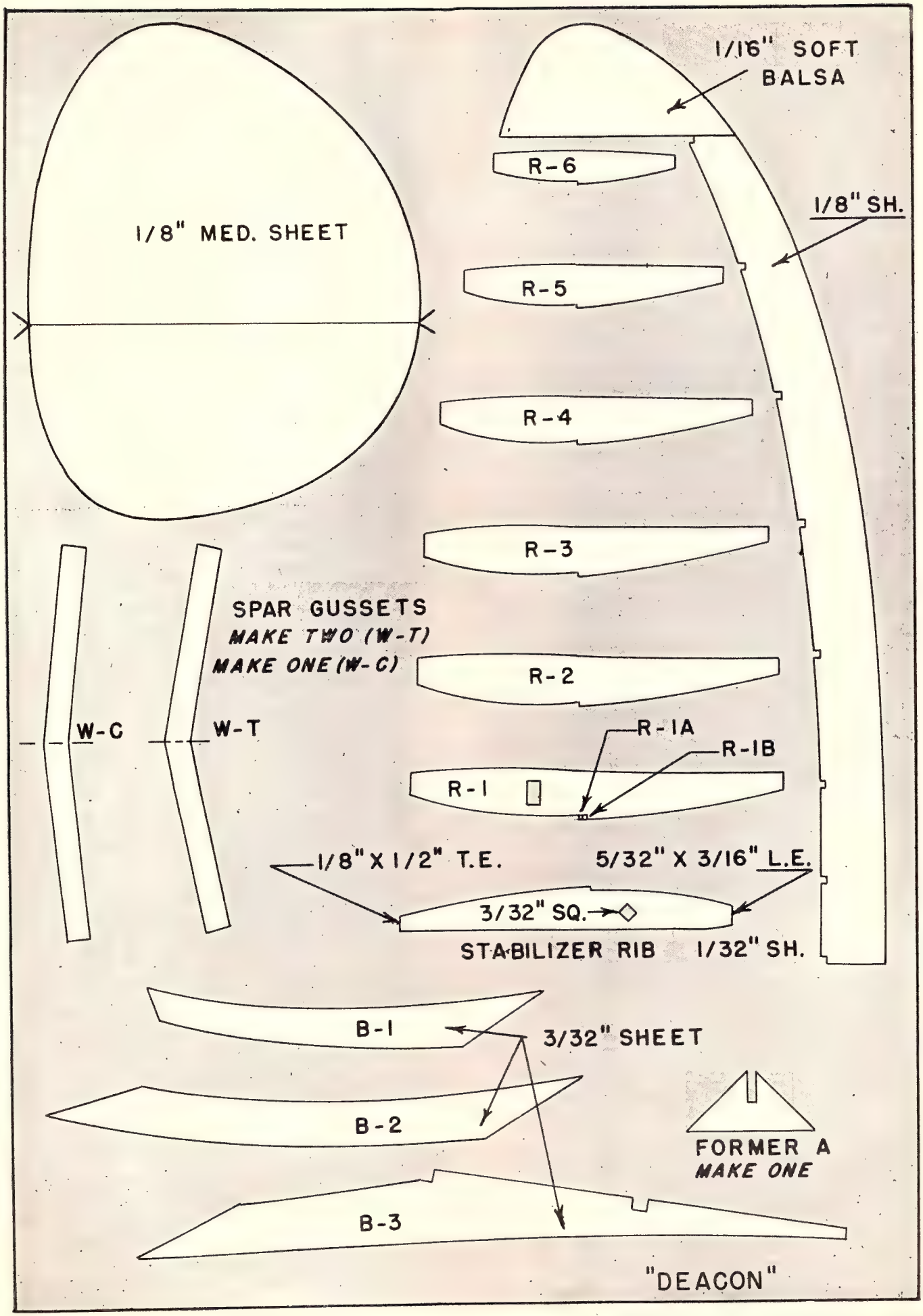
POWER

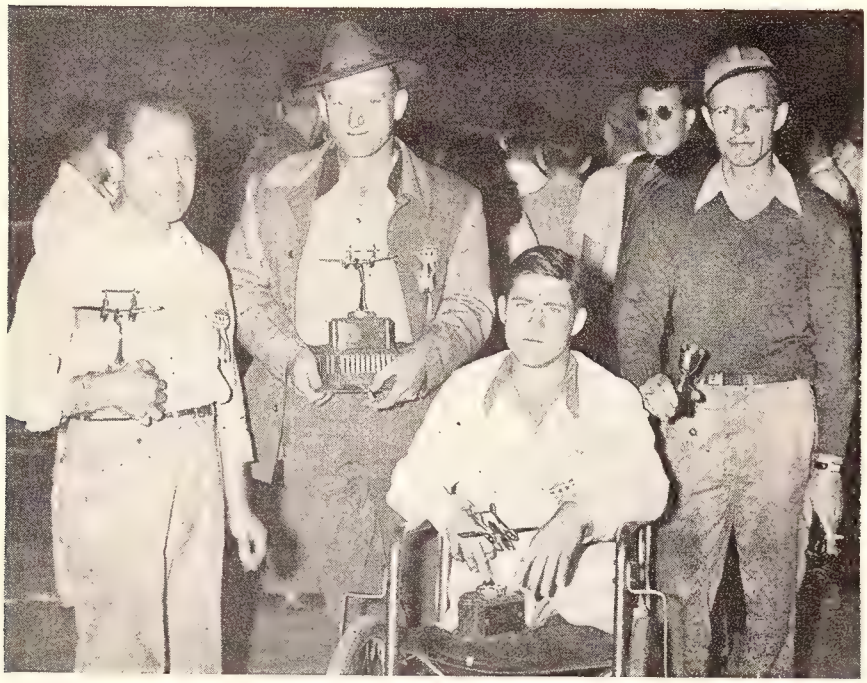
14 STRANDS-1/8 FLAT
24 INCHES LONG

DIMENSIONS TAKEN TO ℄																
TOP VIEW	1/2	19/32	21/32	11/16	TAPER TO 1/2"								7/16	11/32	1/16
SIDE VIEW-T	9/16	11/16	23/32	3/4	STRAIGHT								.00"	.00"	.00"
SIDE VIEW-B	11/16	31/32	1-3/16	1-1/4	STRAIGHT			TAPER TO 5/8"					1/2		1/8
STATIONS	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q

NOTE: ALL VIEWS 1/4 SCALE
UNLESS SPECIFIED

DESIGNED BY
PAUL E. DEL GATTO
"THE DEACON"


1/16" SOFT BALSA
R-6
1/8" SH.
1/8" MED. SHEET
R-5
R-4
R-3
SPAR GUSSETS
MAKE TWO (W-T)
MAKE ONE (W-C)
R-2
W-C
W-T
R-1A
R-1B
R-1
1/8" X 1/2" T.E.
5/32" X 3/16" L.E.
3/32" SQ.
STABILIZER RIB
1/32" SH.
B-1
3/32" SHEET
B-2
FORMER A
MAKE ONE
B-3
"DEACON"



International Aviation Celebration—U-Control Meet. L. to R.: Joe Kitchens, Anaheim, Calif.; "Babe" Dunning, Santa Ana, Calif.; Don Hogan, El Paso, Texas; S. L. Allen, Anaheim, Calif.

INTERNATIONAL AVIATION CELEBRATION

THE El Paso Miniature Motor Club conducted its Model Airplane Contest, in connection with the International Aviation Celebration, sponsored by El Paso Chamber of Commerce at the Municipal Airport on Dec. 14 and 15. Contest was held under ideal weather conditions, witnessed by 10,000 spectators.

Babe Dunning, of Santa Ana, California, set a new Southwest speed record of 117.64 MPH with a McCoy powered plane, flown by Joe Kitchens. Other winners in the Class C Speed event were Joe Kitchens, of Anaheim, Calif., with 115.36 MPH, and S. L. Allen, of Anaheim, Calif., with 110.42 MPH. L. L. Shryock and "Shorty" Brock, of El Paso, Texas, were fourth and fifth with speeds of 107.14 and 103.44 MPH. Class A Speed was won by Charles Bowman, of Berino, N. M., doing 77.58 MPH with his Bantam powered plane. Scale Model event was taken by Gordon Brock with an Ohlsson "23" powered Monocoupe. Grand Prize went to E. C. Ward and Louis Wiegel with an "OK-Twin" powered model of the Piper Cub.

Junior Stunt went to Carlos Terrazas, with Ed. Solguero second and Charles Uchtman, third. Senior Stunt was won by Frank Abel, Don Hogan, second, and Lassie Barksdale, Jr., third.

Seventy entries participated in the contest, including a group of 14 boys from Portales, N. M., with their leader, Mr. Albert Meador. Other groups were from Houston, San Antonio and Lubbock, Texas, and from Las Cruces, Berino and Albuquerque, N. M.

Class C Speed proved to be the most competitive class due to the high speeds obtained from motors with large displacement. The record of 117.64 MPH is the highest speed ever recorded in the southwest territory.

PROP SPINNERS PLANNING NEXT CONTEST

THE Prop Spinners Club of Long Island is now formulating plans for its Eighth Annual Northeastern Championships Model Airplane Contest. Date has been set at August 3rd, at the familiar east coast modeler's heaven, the Hicksville Flying Field, Hicksville, N. Y.

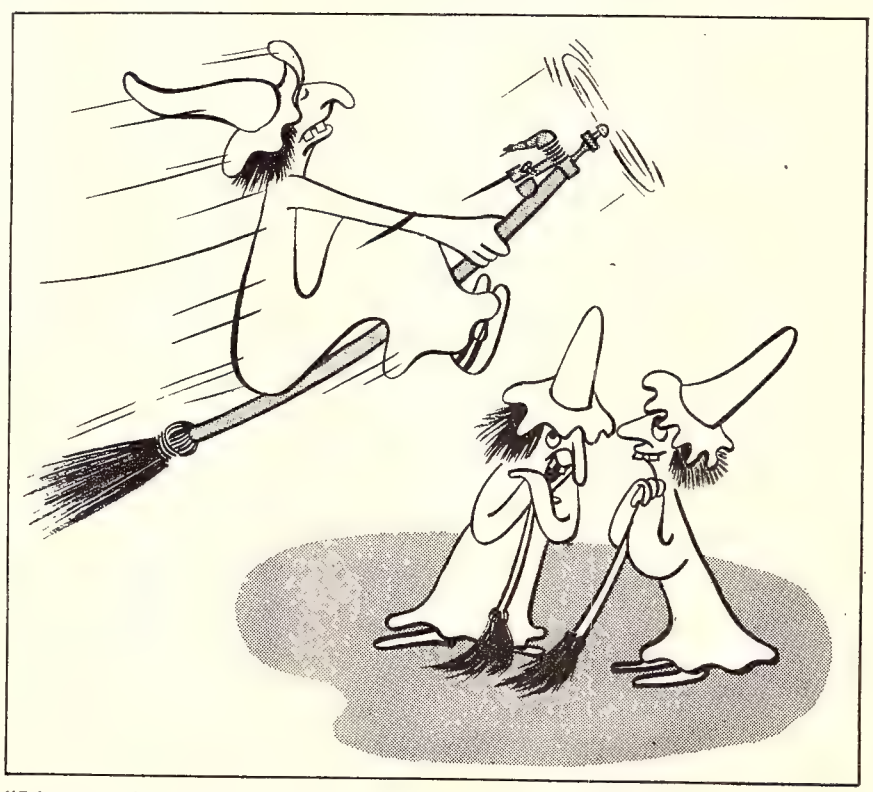
Events are separate Classes A, B and C Free Flight Gas and a combined Towline event. Prizes valued at $500 to $800 will be awarded to at least 15 entries in each event. The Northeastern Championships Perpetual Trophy will again be awarded to the contestant amassing the highest number of points in each of the four events.

CALIFORNIA HOBBY DEALERS TO HOLD NOVICE AIRPLANE MEET

THE Northern California Hobby Dealers Association are now formulating plans for their First Annual Beginners Model Airplane Meet to be held early in 1947. The meet will be open for amateurs only and anyone who has won major prizes at previous meets cannot enter.

During the two days, contests in all phases of flying will be held including Speed and Precision U-Control, Free Flight, Indoor and Outdoor Glider, Rubber Power Free Flight, ROG, ROW, Novelty, Workmanship and a special contest for women only.

Complete plans will be announced when definite arrangements have been made.



"It's one of those new compression-ignition jobs. You don't need any coil or condensers."

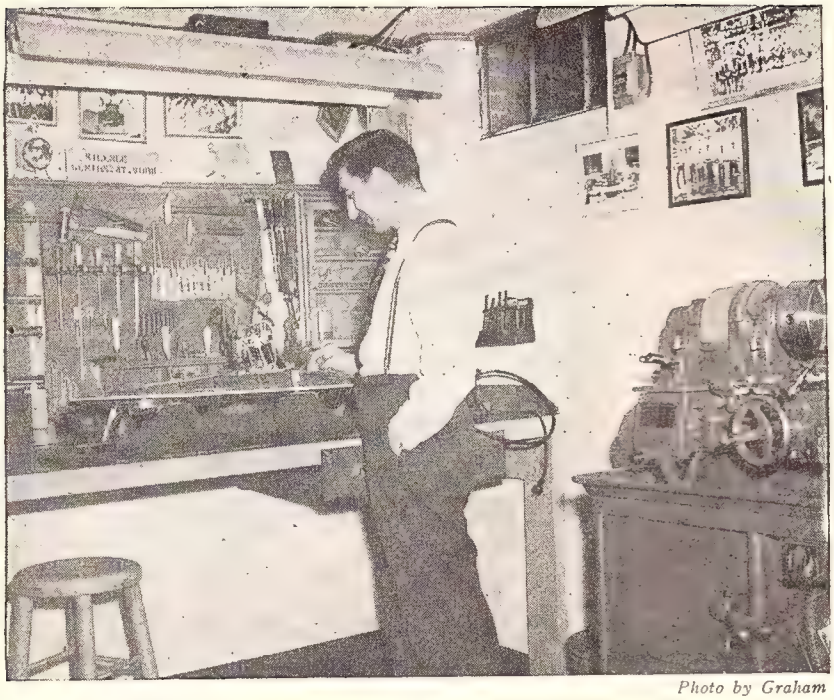


Photo by Graham

Basement workshop belonging to Joe Curcio, of Detroit, Michigan. Joe is an active member of the Detroit Model Power Boat Club.

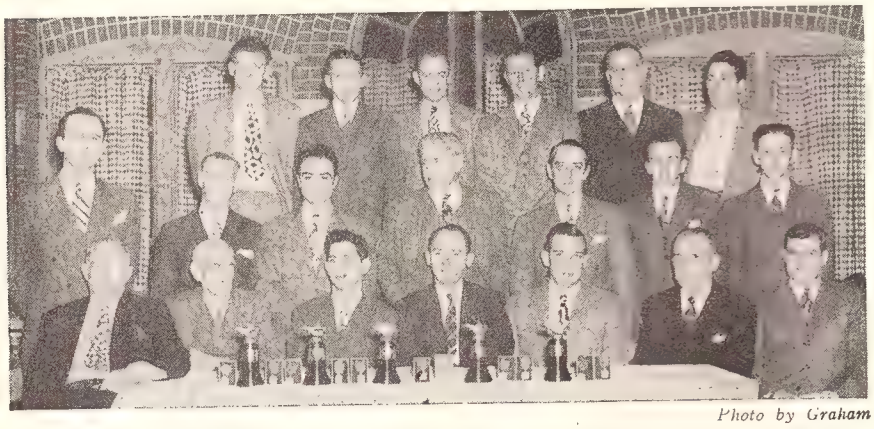


Photo by Graham

Annual Dinner and Meeting of the E. M. P. B. C. Top row, left: Stuffers, Phila.; Thorp, N. Y.; Hemple, Phila.; Clapp, Phila.; Rogers, N. Y.; Weidner, N. Y. Center row, left: Sollers, Balt.; Willis, Phila.; Mesigian, Phila.; Parohl, N. Y.; Buckley, Wash., D. C.; Sparr, Balt.; McDermott, Phila. Seated, left: Leutbecher, Balt.; Taylor, Phila.; Kaufman, Phila.; Traband, Phila.; Seavey, Phila.; Buress, Balt.; White, Phila. Also present, Bob Graham, Jersey City, N. J., at camera.

DETROIT WILL HOLD MODEL POWERED EXHIBITION

THE Fifth Annual Model Powered Exhibition will be held in Detroit, Mich., on May 2nd, 3rd and 4th, from 9 A.M. to 9 P.M. The show will be held at Sylvia Allen Center, 9900 Jefferson Ave., at the Water Works Park.

This year, the exhibition has gone *all out* as the modelers are going to have guide-line model plane contests as well as demonstrations by model power boats and race cars on May 3rd and 4th from 11 A.M. to 5 P.M. at the park. There will also be an exhibit of fine workmanship made during the past year. From all indications, the show should be most successful, for enthusiasm is high in all involved clubs with increased membership proving the point. Stunt flying as well as other types of plane contests will be featured. The Detroit Model Power Boat Club should have the pool much to themselves as there are no other clubs in their vicinity. There is promise, however, that other clubs from Ohio, Indiana, Illinois, New York and Canada will be there to run their boats. The Detroit Model Race Car Club will also have members from other cities to help out in their part of the show. There should be some $700 in prizes for the plane boys alone to shoot for.

Manufacturers, jobbers, dealers and other merchants in Detroit have pledged their support as co-sponsors of the show.

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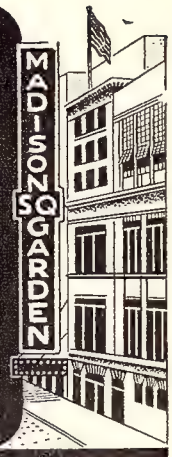

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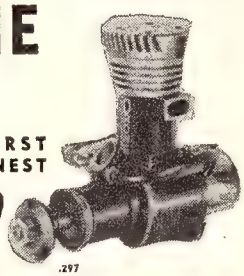
SPARK PLUG	.3 oz.	NO
COIL	2.2 oz.	NO
BATTERY	2.1 oz.	NO
CONDENSER	.4 oz.	NO
SWITCH	.5 oz.	NO
BATTERY HOLDER	.2 oz.	NO
WIRES	.3 oz.	NO

DRONE B
AMERICA'S FIRST
AMERICA'S FINEST



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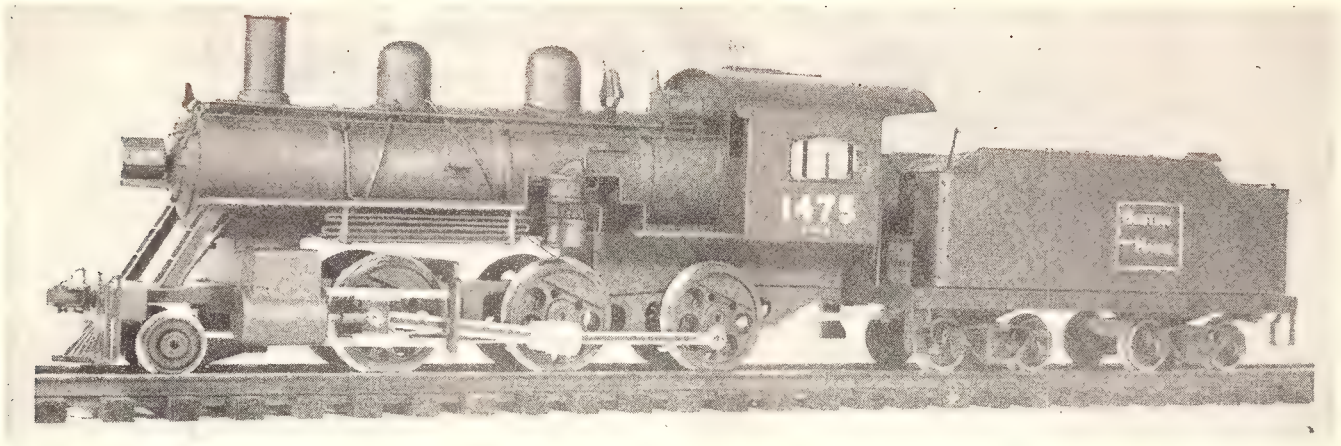


Boston & Maine Mogul

PART ONE

By LEWIS AUSTIN

THIS model of the Boston & Maine Mogul in O-Gauge has been made just as strong as possible, designed to take rough treatment, dealt primarily by my young son (incidentally, he's doing a *bang-up* job as a model railroad operator). Construction is simple, but it still has the detail to satisfy any model fan. All critical soldered joints have been silver-soldered, but this is not absolutely essential. Soft solder is sufficiently strong for ordinary usage. Do not let the fancy drivers frighten you. At the time of my construction, model cast drivers were not available, so I had to turn the drivers on a lathe and drill holes to resemble box-pox drivers. These were easily made, as will be explained later, and present a pleasing appearance as seen in the photos. Cast drivers are now becoming available once again, so you may prefer to use spoked drivers. Castings may also be available for other parts, such as the cylinder block, domes, stack, boiler front, pilot and boiler fittings. This particular model is entirely built-up with the exception of the air pump casting and truck frames on the tender.

Due to the shape of the firebox, it is impossible to mount the motor in the locomotive, so a tender drive is arranged. This has its advantages, however, for there is plenty of room in the tender for a #3 K & D motor and the worm and gear is completely hidden by the firebox.

Construction should start with the locomotive frame. Make up frame sides from ⅛" thick sheet brass. Cut two strips 1 1/16" wide by 8½" long and solder together. Frame sides can now be cut and filed to shape and the ¼" axle holes drilled and reamed. Small cut-outs in the frame are made by drilling 3/16" holes in the corner and then sawing out the metal. After the frame sides are completed, melt them apart and make up the spacers as shown by dotted lines on the drawing of frame side. Make certain the spacers are *exactly* alike in width to prevent distortion when frame sides are screwed in place. Clamp frame together with spacers in place; drill and tap 2-56 holes in the spacers. The frame is now screwed together.

Make up axles from ¼" drill rod. Turn the ends to 3/16" diameter to form shoulder for mounting the wheels. If you intend to turn the pilot truck wheels, make these axles the same as the driving axles.

Mount axles in the holes drilled into frame and check for alignment. If axles are not parallel to each other, loosen the 2-56 screws holding the frame sides to the spacers and shift the sides until the axles line up. When the frame is perfectly aligned, solder all joints on the frame so it cannot shift at some later date. This completes the frame.

Drivers are easily made from 3/16" thick cold-rolled steel. Lay out wheels on the steel plate and drill and ream the 3/16" axle holes. Make certain they are a press fit on the axles. Now drill other holes as shown on the drawing and saw out the wheel blanks themselves.

Mount the wheel blank on a 3/16" nut-arbor and turn wheel to 1 5/16" diameter. Do not turn the flange yet. The wheel is now removed from the nut-arbor and mounted in a three-jaw chuck. The recess is turned in the face of the wheel to form the tire. Mount wheel on the nut-arbor once again and turn both the flange and tread. The counter-balance and crank throw are cut from 1/16" thick brass and soldered in place on the wheel.

For sake of accuracy, make up a drill jig for drilling the crankpin holes. Use a piece of 3/16" thick cold rolled steel about ¾" square. Drill a 3/16" hole through the steel piece and then drill a #43 drill hole ¼" from center of the 3/16" hole. A piece of 3/16" drill rod is now pressed into the 3/16" hole, completing the jig. Clamp jig on the wheel with 3/16" drill rod in the axle hole. Make certain the jig is lined up square with counter-balance and drill #43 hole through the wheel. In this manner, the distance between axle hole and crankpin hole will be exactly the same on every wheel. This is most important to prevent the side rods from binding. Tap crankpin holes 4-40 and the drivers are completed.

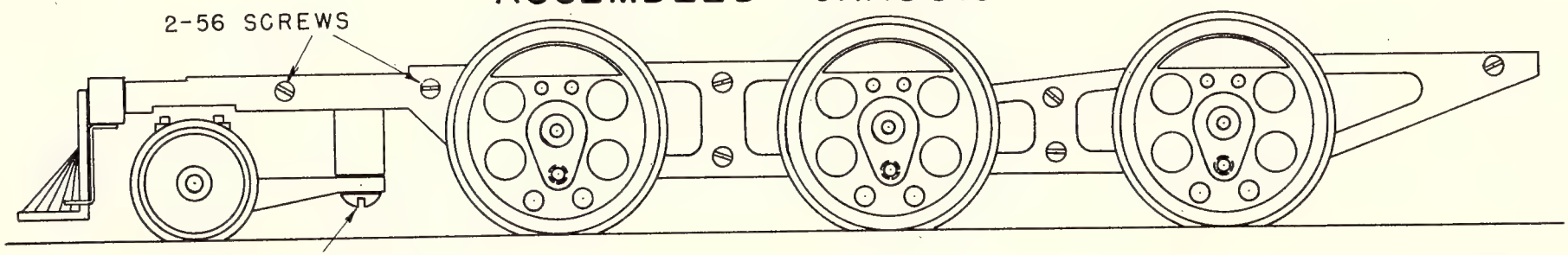
The pilot truck is sawed and filed to shape from a piece of brass. Drill and ream the ¼" hole for the axle and drill four 1/16" holes as shown on top of pilot truck. Short pieces of 1/16" brass rod are pressed into these holes. The wheels are a simple job to turn on a lathe. If you prefer to purchase a pair of wheels, you must drill the axle hole in the pilot truck to fit the axle supplied with the wheels. Drill #9 hole for mounting truck; mount wheels in position. Don't forget to add washers in back of the wheels so the truck rolls easily.

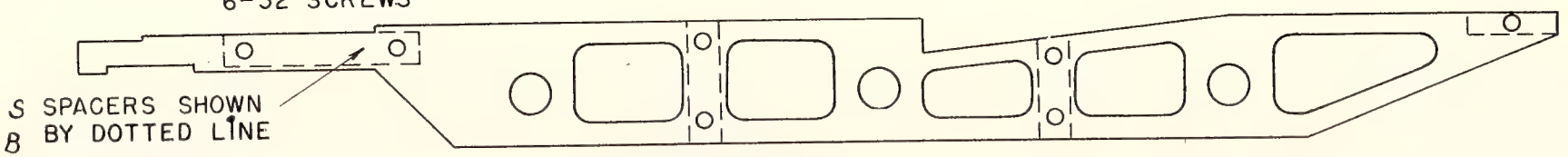
A casting can be purchased for the pilot but it is just as simple to make one out of brass stock. The built-up pilot looks very realistic and adds much to the appearance of the locomotive. The pilot beam is merely a piece of brass 9/32" x 7/32" x 2½". Drill two 3/32" holes through the beam for mounting to the front end of the locomotive frame. A slot is filed in the center of the pilot beam to clear the coupler shank, completing this unit. The two parts of the pilot are made from 1/16" thick sheet brass. Saw and file the two pieces to shape as indicated. Slots in the pilot are sawed with a back saw and then filed neatly with a flat jeweler's file. The bars of the pilot are then bent out. Clamp pilot in a vise with the bars extending up from the vise and the line where the bars are bent, even with top of vise jaws. Start by bending center bar out until it meets the point of the bottom piece of the pilot. Hold this bottom piece over the pilot for checking the bends. The rest of the bars can then be bent out so they line up with bottom piece of pilot. Note that the angles of the bars get more shallow as you get to the edges of the pilot. File ends of the bars so that the bottom of the pilot fits flat on them. Make certain the bottom piece is square with the pilot, then solder completed unit together. Bend pilot steps to shape from 1/32" thick sheet brass and solder in position. Mount pilot on frame with two 2-56 hex head screws. Slotted screws will spoil the appearance of the finished model.

Do not mount and quarter the drivers as yet. Once they are mounted, they cannot be removed from the frame unless one wheel is pulled off of the axle. There are a few more holes to be drilled and tapped in the frame for mounting steps, crosshead guide support and bearing blocks. These holes are best drilled directly from the parts that they are to hold in position. Next month, we'll take up from this point with construction of these parts, plus the rods, cylinder block, crossheads and flexible shaft.

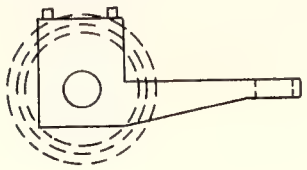
BOSTON AND MAINE MOGUL
"O" GAUGE

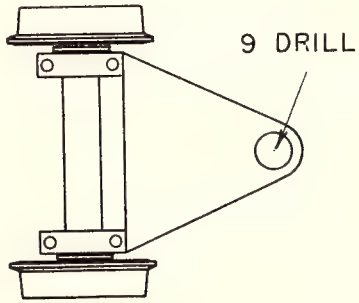
ASSEMBLED CHASSIS



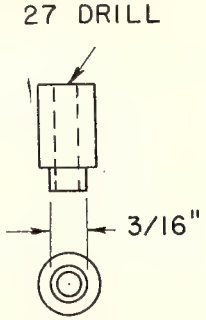


FRAME SIDE

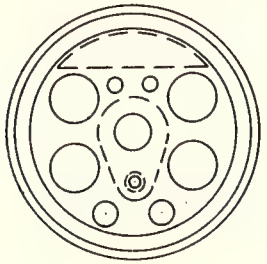




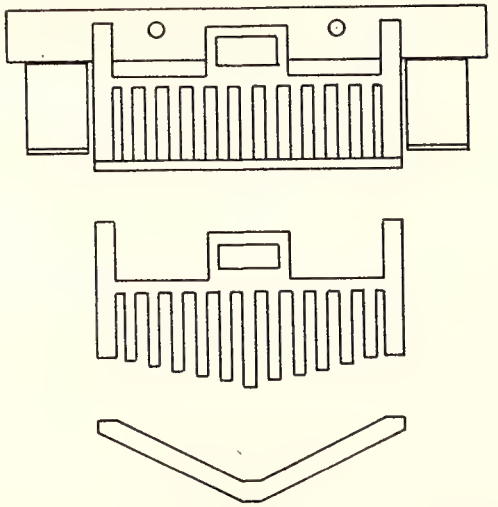
PILOT TRUCK



PILOT TRUCK SUPPORT

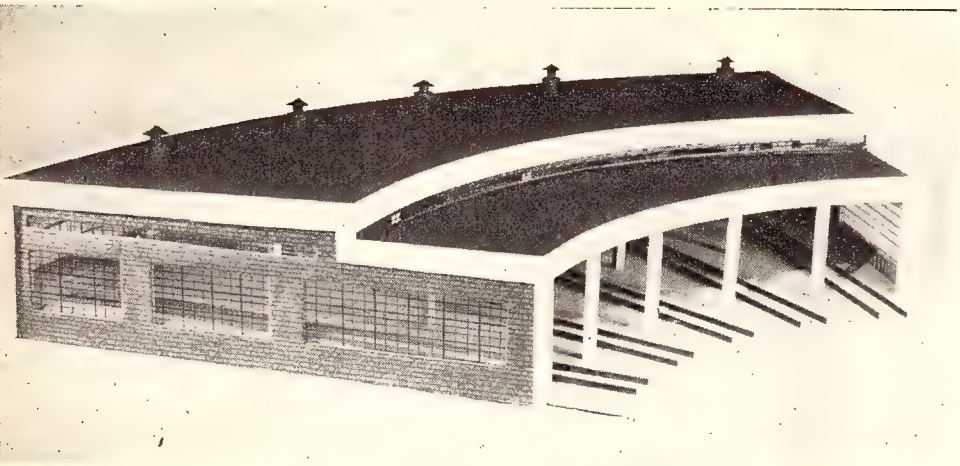


DRIVE WHEEL



PILOT

L. AUSTIN



Roundhouse

THE very presence of a roundhouse on your layout does much to give the real atmosphere to your model railroad. No other building better typifies real railroading than a busy roundhouse. That's the answer; keep it busy overhauling your locos and your layout is a success! These models can be made either smaller or larger to suit your own personal needs. If five stalls are too many, cut it down to three or four. If you anticipate building several more huskies for your road, don't be afraid to tackle a larger roundhouse. The idea is the same, just change over a few dimensions and start to work.

Construction is entirely of wood and cardboard. Some brass may be used for certain parts if desired, but it is not essential. Build up the model as a unit to be added to your layout when completed. These stalls have been made sufficiently long to accommodate your largest engines. Plans are shown for HO gauge, but can be changed over easily to other gauges.

First lay out the floor plan on a piece of ¼" plywood. Make certain the wood is not warped or you will foul up your track connections where they meet with the turntable. From a center point, strike off a 9" and 22¾" radius for front and back lines of baseboard. On the front line, measure off six individual points, exactly 2" apart. With a straight edge from center point connected to each of these points, draw in stall lines. As an added help, also draw in lightly center lines of each stall. Baseboard can now be cut to shape.

In actual roundhouse practice, we do not see the track ties used within the building, but rather see the tracks set directly into the concrete floor. In order to simulate this as closely as possible, carefully mark off lines *exactly* corresponding with NMRA standards for HO track. Using a handy-grinder, rout out grooves in baseboard to receive the five sets of tracks. It is important that this be done most accurately, for all sorts of trouble will occur if track is off gauge. Tack a strip of wood onto the baseboard to act as guide for your router. Clean out the grooves carefully. At some spot along each groove, drill a hole entirely through base to accommodate wire leads coming in to the rails. (2-rail system.)

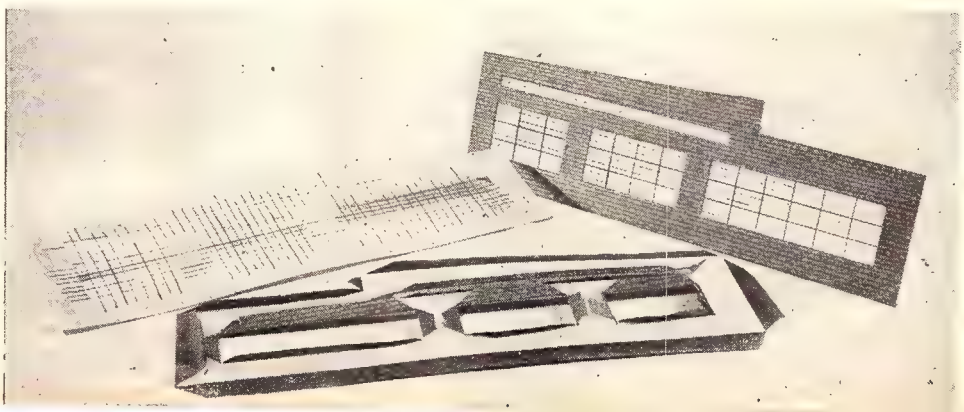
As seen in the photos, the open frame is constructed first and the sides and roof later fastened on. As indicated on the plans, mark off the location of the framework on the base and drill holes to accommodate #17 wire brads, press fit. The entire base can now be given a coat of dull gray paint to simulate a concrete floor. If building in the larger gauges, it will be both practical and interesting to build up actual pits to go between each pair of tracks. This can be done by cutting out your pit opening between rails and carefully fitting in a built-up pit made from either cardboard or brass. In the smaller gauges, however, merely paint in the pit area with a very dark gray and the visible effect will be the same.

At this point, cut your rail to fit the grooves in the base. Solder your wire leads to each rail (2-rail) and install the track in the open grooves.

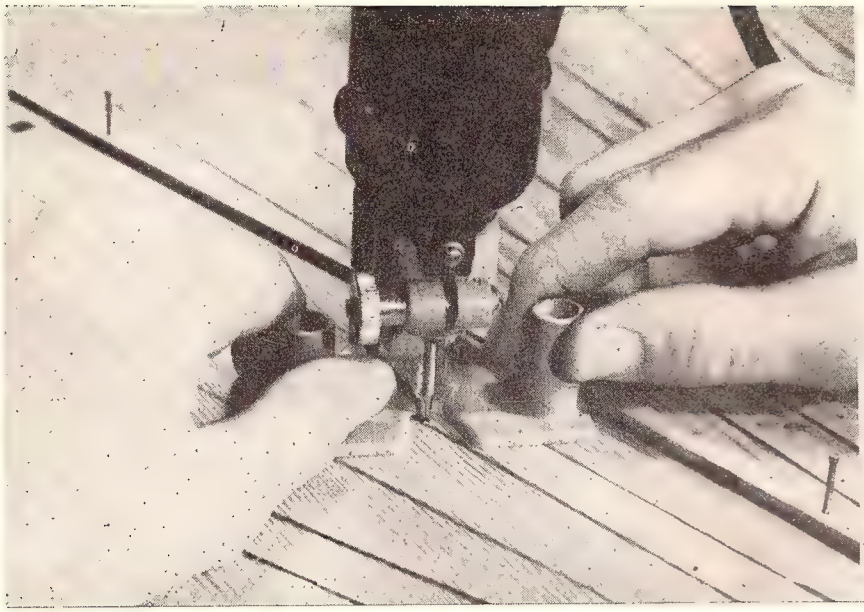
The entire framework is built of 3/16" x ¼" wooden strips, held together with #17 wire brads. The strips will split very easily, however, so first drill holes where every joint occurs so the brads can be press fitted into them. The long curved strips for the top of the frame can be handled very easily if they are first soaked overnight in linseed oil. When bending them to shape, work the strips very carefully in your hands until the desired curvature is obtained. Again, drill holes at every joint for the brads. Assemble the frame completely and paint entirely with dull white. When dry, paint the lower section of the main supports the same shade of gray as the floor.

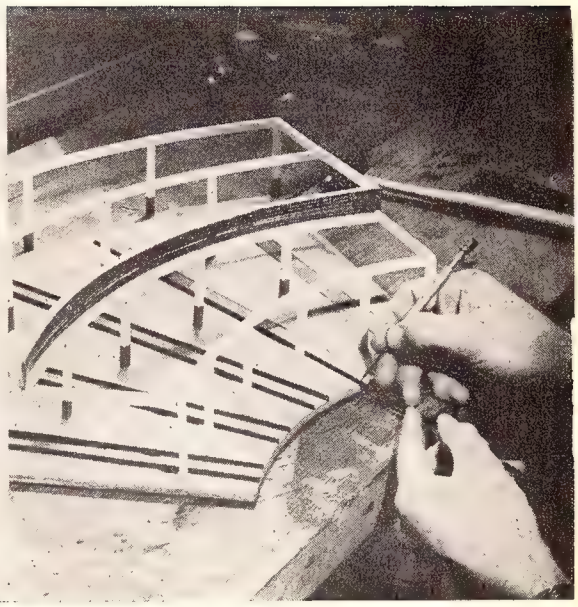
Sides and rear are built up from bristol board (see photo), cellophane or celluloid and then covered with brick paper on the outside face. Each section is composed of two individual pieces or pairs, one taking the window material and the other taking the outside facing, after which the two pieces are cemented together to make the completed side. On a piece of heavy bristol board, lay out both sides and rear, cutting two identical pieces for each, a total of six pieces in all. Don't be worried about the apparent weakness of the bristol, for when the sides are completed they have amazing strength. Cement either cellophane or celluloid to the outside edge of one section. If cellophane is used, moisten slightly after cementing to the side and it will become very taut when dry. On this surface, rule off all window framing with ruling pen and india ink. Do not press too heavily on the cellophane as it cuts very easily when taut. Now by holding the side to the light, you can see the pleasing effect. On each corresponding piece of bristol, cement brick paper (dull red shade) again to the outside face. It is best to first coat the bristol side piece and the brick paper as well with cement and allow to dry thoroughly. After drying, lightly cement the paper again and apply to side. Cut out window openings and fold back flaps and cement to inside face. Again, cement carefully the two inside faces of the sides (cellophane side and inside of brick paper section) and allow to dry. Add another light coat of cement and glue both corresponding side pieces together. (See photo.) The result will be a surprisingly strong side with a realistic appearance. Build up the remaining side and rear in like manner.

We are now ready to cement the sides and rear to the frame. Again it is most important that you first coat both the framework and the sides and rear where they will touch the frame with cement, allowing this to dry. Add another light coat of cement to the framework only and apply the side and rear pieces. Have



Built-up sides for roundhouse are shown in three different stages of construction. After applying cellophane to outside face of cardboard strip, window framing is marked off with ruling pen and ink. Other strip is faced with brick veneer paper and all flaps turned in to inside face. Both strips are then cemented together to form completed side.





Left—Routing out grooves for the rails in baseboard of the roundhouse. Note the wood strip tacked to the board which acts as guide edge for grinder. Right—Scribing rails to length before final installation in grooves.

a few C-clamps handy when fastening the rear piece in position. Because of the curvature, there is a tendency for the rear to pull away from the frame before the cement has a chance to set. Use about three or four clamps spaced evenly along the rear framework until the cement is thoroughly dry.

Note that there is also a small strip added just over the front roof. This is built up in exactly the same way you built the side pieces and cemented to the frame.

The narrow flat roof at the front is fastened permanently in place, however the main rear roof must be easily removed to give access to the inside of the building. Locomotives frequently need repair, they may get stalled inside or you may have to get inside to change the lighting, etc., so it is best to arrange the roof accordingly.

The front roof meets flush with the sides and this is easily done by placing a sheet of bristol on top of the frame and directly trace the outline onto the bristol. Cut this section out carefully and cement in position. Now obtain several large sheets of medium grade emery cloth. This will be cemented directly over the bristol board roof to simulate roofing material. Due to the curvature and size of the roof, it will be necessary to put this on in two sections. Cement both the underside of the emery and top of the roof and allow to dry. Again coat lightly with cement and place emery cloth on roof. Give this a coat of dull black paint which will cover the joint in the roof very efficiently. The main roof is made up in identical fashion except that it is not cemented permanently in place. Since it is to be removable, we will want it to be just as strong as possible in order to withstand frequent handling. For this purpose, obtain a heavy grade of artists' illustration board. Place over open frame of main roof and trace outline directly on it. It is important that this be cut out very carefully as it must fit exactly after the roof molding is put in place.

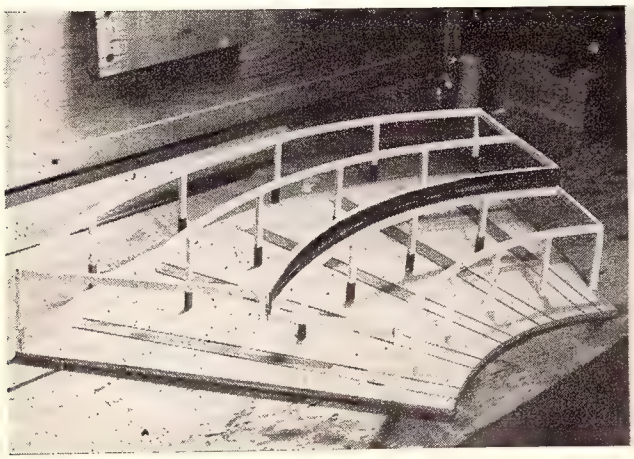
Emery cloth will have to be added in three sections due to the large area, but again by following the same procedure used on the front roof, you will obtain a very flat, finished effect. As indicated on the plans, build up five smokejacks and cement to the roof. These are located directly over their respective stalls, centered over the tracks. These jacks can be made up easily by using two different size wood dowels cemented together with a brass or cardboard cap fastened on top. Paint dull black and cement to roof.

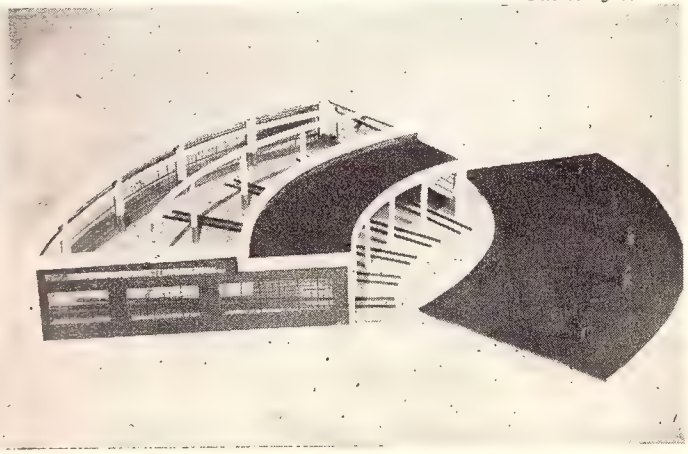
All that now remains are the cardboard strips or molding which goes all around top of the model and down the corners, covering all ugly joints. Cut up quite a few strips ½" wide, and coat with cement to seal the pores. When dry, lightly coat again with cement and add to building as shown in the photos. The strip around the top of the model should extend at least ¼" over top of sides to hold roof in position.

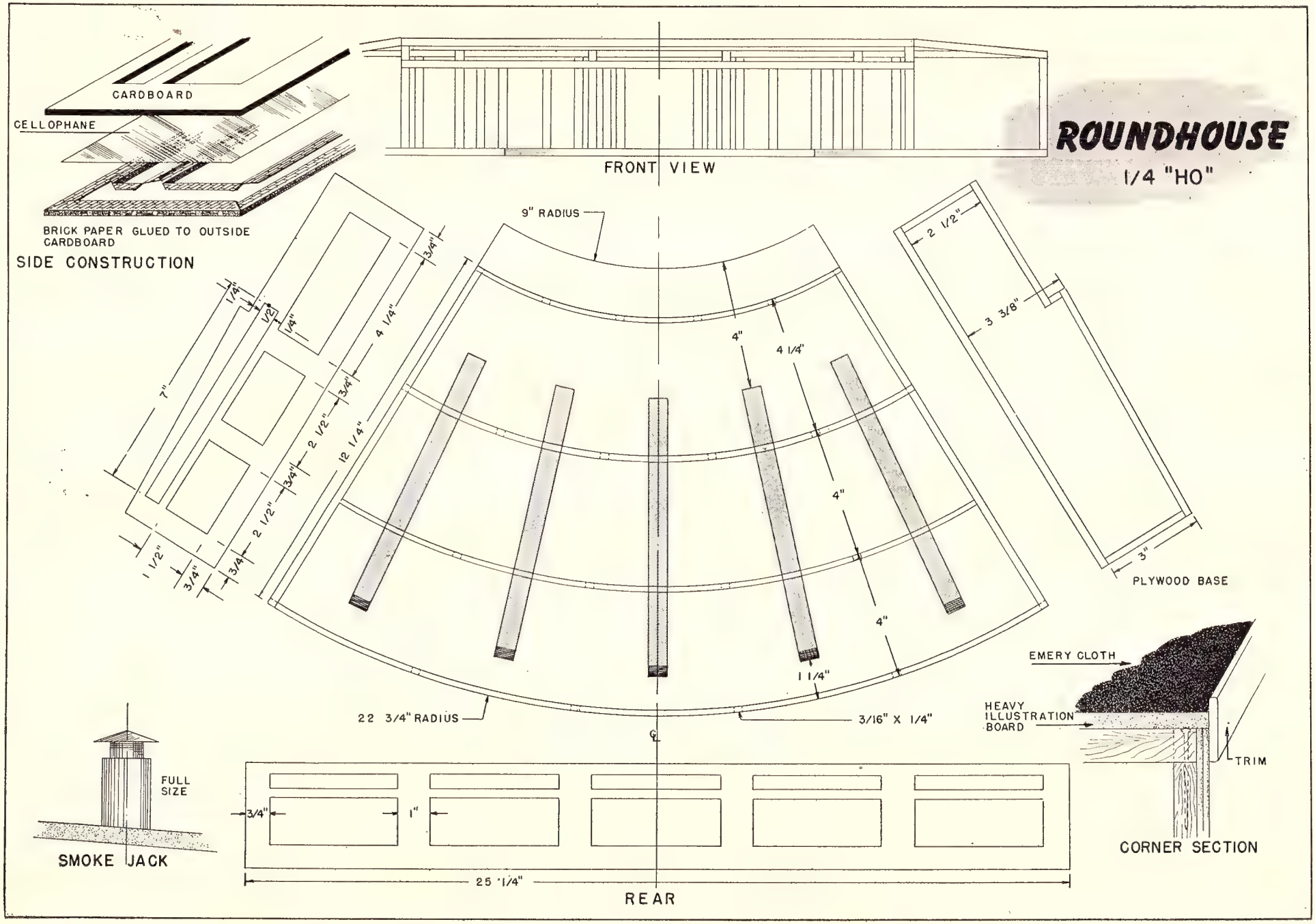
No lights were installed in this particular model as yet, but is on schedule for the near future. When the time does come, small pilot bulbs will be purchased and hooked in series to a bell transformer for use with regular 110 volt house current. These transformers come rated at 8, 10, 12 and 14 volts, so depending on the number of lights used, choose your transformer accordingly. Always burn your lamps at a lower voltage than rated, in order to give them a longer life.

This completes your roundhouse, so install it in place on your layout. Build up your groundwork to receive the model and you'll swear it has been there all your life!

Photos by Haddad






CARDBOARD
CELLOPHANE
BRICK PAPER GLUED TO OUTSIDE CARDBOARD
SIDE CONSTRUCTION
FRONT VIEW
ROUNDHOUSE
1/4 "HO"
9" RADIUS
7"
1/4"
1/2"
1/4"
3/4"
4 1/4"
3/4"
2 1/2"
12 1/4"
3/4"
2 1/2"
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3/4"
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4"
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4"
4"
1 1/4"
22 3/4" RADIUS
3/16" X 1/4"
2 1/2"
3 3/8"
3"
PLYWOOD BASE
EMERY CLOTH
HEAVY ILLUSTRATION BOARD
TRIM
CORNER SECTION
FULL SIZE
SMOKE JACK
3/4"
1"
25 1/4"
REAR

Red means proceed

THAT'S a new one! At least that's the way it sounds, but actually it's an old, old story. A big red ball displayed at the top of a mast gave a *proceed* indication in the early days of block signalling. The ball signal has been modified to meet different conditions, some still being in use, but they are rapidly giving way to modern signals.

In recent years, their use has been restricted to locations where traffic did not require interlocking. Generally a Railroad Crossing and several hand switches are involved and a switchtender is employed. The ball signal is used to indicate proceed for one of several routes. Since a hand or lantern signal would likely be accepted by two or more trains, it is obvious that the ball signal which by its indications will only be accepted by the train for which it is intended, presents a greater degree of safety. It is this same type signal which gave rise to the slang "Highball" which today is a signal waved by the hand or by lamp in a high, wide semi-circle, meaning "come ahead" or "leave town" or "Pick up full speed". When using the term "highball" as a verb, it means to make a fast run.

Where more than two indications were required, several balls placed one above the other were used. A tin pipe, resembling a very large stove pipe, was provided and so placed to hide the surplus balls in it. Only those required to display the proper indication would appear above this shield. This was known as a *tin bucket signal.*

By WARREN B. CRATER

This two-indication signal described here is modeled after a prototype which has since been abandoned. It was located at Fabyan, N. H., protecting a crossing of single track branches of B&M and MeC. One ball located at the top of the mast meant *proceed* for one road in either direction. Both balls could give the same indication to the other road. These indications affected only the use of the crossing. The remainder of these branches were operated on the rules of the respective roads.

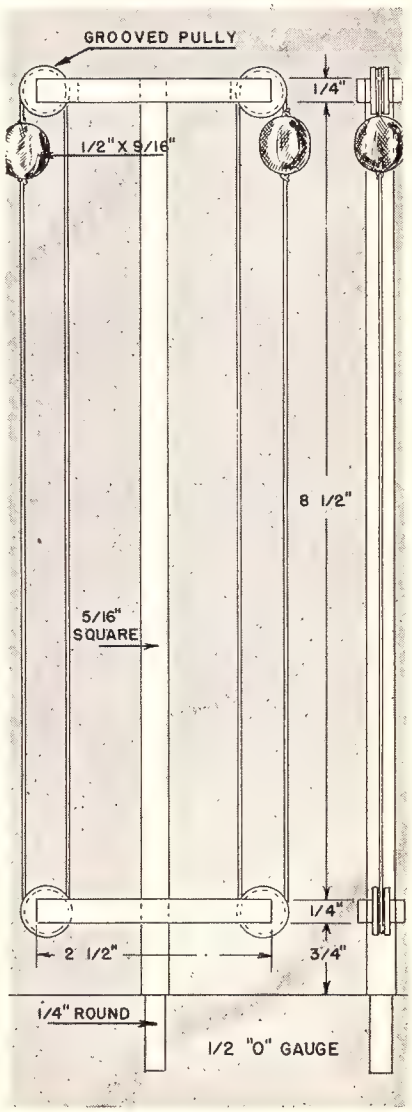
This particular model resolves into a one-evening project and may be built from odds and ends. The mast is 5/16" square wood, rounded off on the lower end where it will set in a drilled hole in the base board or scenery. The cross arms are 3/32" x 1/4". Use spacers between these for strengthening; assemble with brads and cement. Drilling holes for the the brads will prevent splitting the wood.

Pulleys and balls may be turned from 1/2" wood dowel held in the lathe chuck. If you prefer, metal may be used. Drill center holes in the pulleys to clear the pins used to carry them in the cross arms. (1/2" wire brads, which are #60 drill size, will do nicely). Drill, turn the groove and part off each pulley separately. The holes through the balls should be just large enough to accommodate three thicknesses of small bare copper wire, #22 or #24 being about right size.

When forming the rings for attaching the balls, take a piece of wire about two inches long. Put it through the ball, bend the ends and push through. Catch ends with your pliers, place nail through each loop and pull tight. Bend the ends over to hold and clip off the surplus. Now string them up, using ordinary black thread. Draw up sufficiently tight to prevent the ball from descending by gravity.

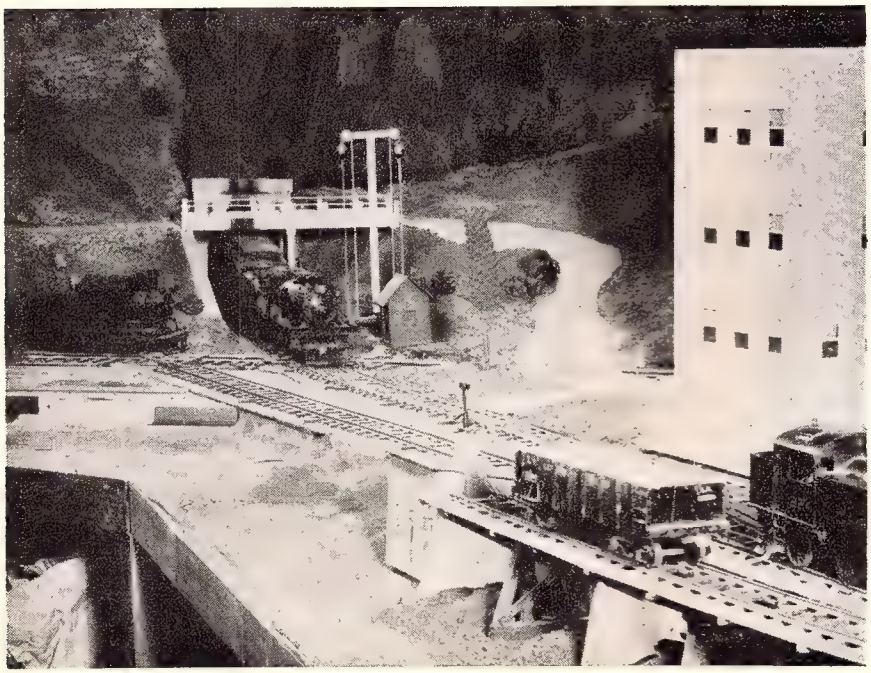
Paint the lower cross arm black, also the mast from lower arm to the ground. The remainder of the mast and top cross arm are painted white. Give the balls a coat of brilliant red, about the usual shade of cabooses.

When a station is located at the crossing, the agent-operator usually controls the signal. Where there is no station nearby, an operator must be employed and a cabin similar to that used by a crossing watchman must be provided. Note the small structure used on the author's layout in the photo.



Highball signal at home on the author's layout. Note the operator's shanty which can be easily built up from bristol board.

Photo by Haddad



IDENTIFYING IRON TRAINS

along the tinplate track with *Louis Hertz*

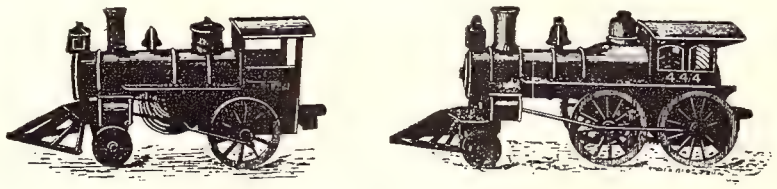
IT IS practically impossible to imagine the enormous quantities of small and medium sized cast iron pull trains which were made and sold in this country up to about 1930. Perhaps a dozen companies made them, and their annual output was tremendous. Prices were often quoted only by the gross, even on some of the larger and more expensive items. Until comparatively recent years, almost every small stationery and novelty store sold cast iron train sets. Rising costs of iron finally brought them to a halt, but even through most of the 1920's, the stream was unabated.

Surviving sets indicate the range of sizes and styles, however, the almost invariable lack of manufacturers' names and other identifying marks made the task of properly classifying them seem hopeless. Even appearances were of little value, for as we have pointed out before, many iron trains of 1925 were substantially like those of 1895, and a "wood burning" type or "old fashioned headlight" were by no means the positive method of dating these models as some might imagine. The truth is that many types were made straight through the period, more than one manufacturer producing similar designs, there being just so many kinds made that it appeared almost impossible to get much accurate information about them. These factors must be borne in mind when considering the following remarks.

As time went on, more models, catalogs, advertisements and other data became available for study. At last we felt there was sufficient accurate data on hand to present some introductory material. Readers who have asked us to identify specific iron locomotives and cars, or to publish an article on later iron locomotives, will recall our reluctance previously to do so.

Early cast iron locomotives, of course, have been discussed at length on these pages. Surprisingly enough, facts and identities of most early makes are fairly well established, and a good deal is known about the fine iron trains of the 1880's and 1890's made by Ives, Carpenter, Wilkins and other makers. Of the later iron trains, usually smaller and cruder than their pioneer models, less can be said with any assurance of accuracy.

There were quite a few manufacturers, however, the leading ones seem to have been Wm. Shimer, Son & Co.; the Hubley Mfg. Co.; Grey Iron Casting Co.; the Arcade Mfg. Co.; Kenton Hardware Co.; the Kingsbury Mfg. Co., who succeeded the Wilkins line. Many Kingsbury models featured iron locomotives only, with cars of stamped steel.



These two trackless clockwork iron locomotives were included in the Hubley 1906 line, although by that time clockwork track trains had attained widespread popularity. These models were 8" and 9¼" long respectively.

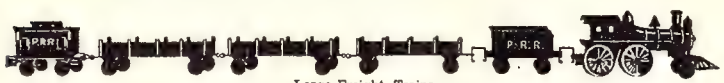
To give an idea of the extent of some of these lines, a few figures may be of interest. One comparatively late Grey Iron catalog lists 44 sets. The Kingsbury line for several years in the period around 1920, consisted of 35 numbers. Excluding horse cars and trolleys, a somewhat earlier Shimer catalog offers no less than 106 sets!

Naturally, we should mention that in some cases the sets differed only in finish, some being painted and others, of identical design, being offered under a different number in a nickel-plated finish. Incidentally, a favorite paint combination on three-car iron trains was a black locomotive with one car painted red, one white and the other blue.

Identifying trains as to their manufacture is usually an extremely difficult job. Features are seldom distinctive. In later days, for example, both Grey Iron and Hubley had automatic couplers on their iron trains. Practically every manufacturer produced a variety of almost identical small 2-2-0 locomotives with four wheel tender attached. Every reader is probably familiar with the model referred to, and it seems almost hopeless to identify it. As with other iron items, one thinks the identical piece has been found

(*Continued on page 43*)

LANCASTER BRAND IRON AND STEEL TOYS 13



Large Freight Trains.

No. 83, Locomotive, Tender, 3 Freight Cars and Caboose. Painted. Length 42½ inches. Packed 1 in box. 2 doz. in case. Weight 120 lbs.

No. 132, Locomotive, Tender, 2 Freight Cars and Caboose. Painted. Length 34½ inches. Packed 1 in box. 3 doz. in case. Weight 150 lbs.

Freight Train.

No. 87, Locomotive, Tender and 3 Cars. Painted. Packed 1 in box. 1 doz. in case. Weight 130 lbs. No. 87-N, same as No. 87, Nickled.

No. 61, Freight Train, Locomotive, Tender, Car and Caboose, Painted. Length 25½ inches. Packed 1 in box. 3 doz. in case. Weight 135 lbs.

Dump Train.

Small Freight Trains.

No. 50-1, Locomotive, Tender and 1 Car. Painted. Length 10 inches. Packed 12 in box. 24 doz. in case. Weight 225 lbs. No. 50-1-N, same as No. 50-1, Nickled.

No. 50-2, Locomotive, Tender and 2 Cars. Painted. Length 15 inches. Packed 6 in box. 12 doz. in case. Weight 180 lbs. No. 50-2-N, same as No. 50-2, Nickled.

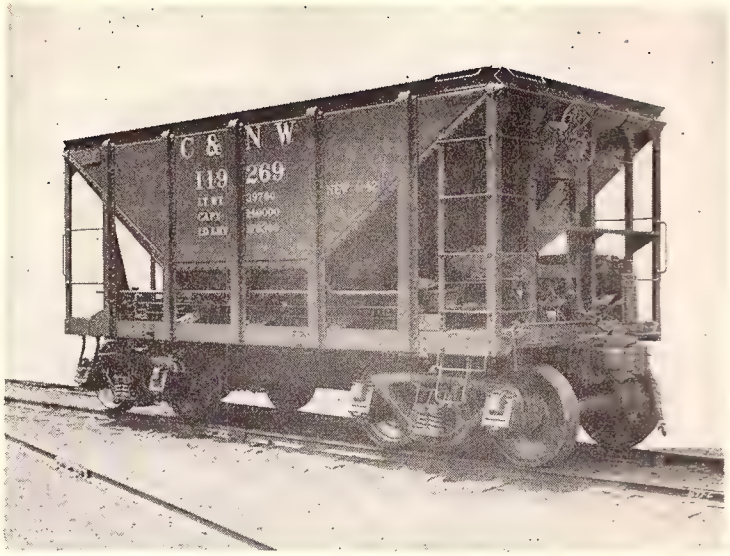
No. 50-3, Locomotive, Tender and 3 Cars. Painted. Length 19 inches. Packed 6 in box. 6 doz. in case. Weight 110 lbs. No. 50-3-N, same as No. 50-3, Nickled.

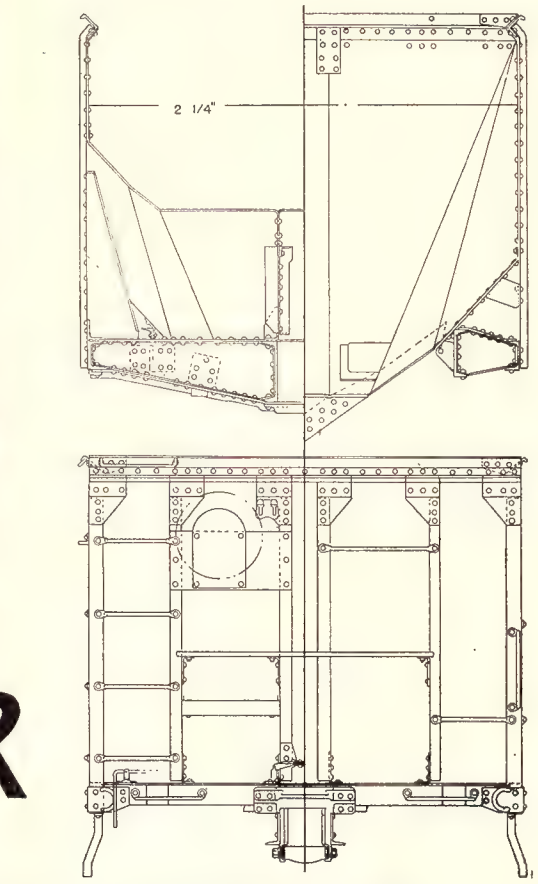
No. 50-4, Locomotive Tender and 4 Cars. Painted. Length 24 inches. Packed 3 in box. 6 doz. in case. Weight 130 lbs. No. 50-4-N, same as No. 50-4, Nickled.

Dump Train.

No. 86, Locomotive, Tender and 2 Cars. Painted. Packed 1 in box. 2 doz. in case. Weight 210 lbs. No. 86-N, same as No. 86, Nickled.

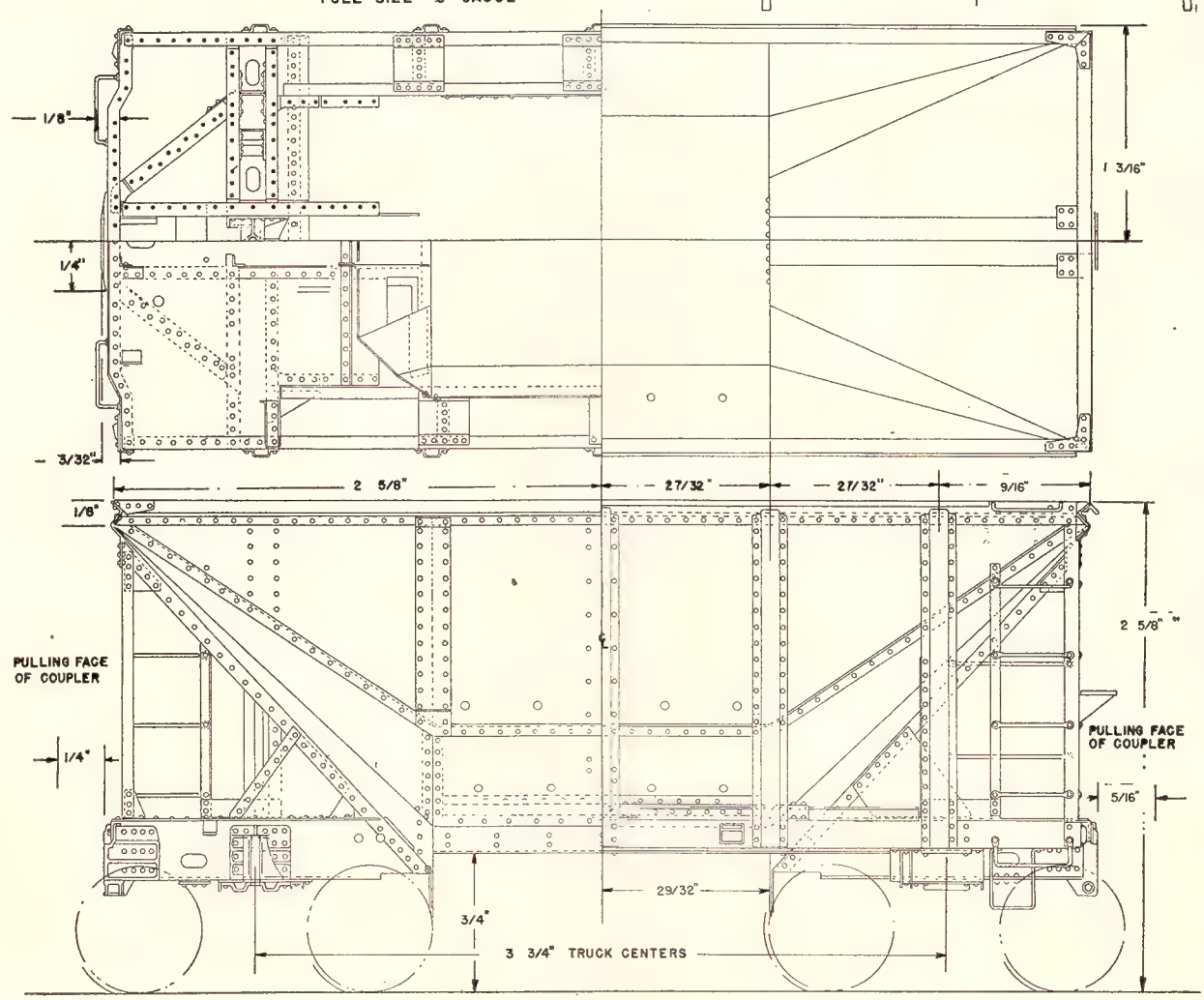
Page from the 1906 catalog of the Hubley Mfg. Co., Lancaster, Pa. Models pictured comprised the line of cast iron pull toy freight trains made that year. The "600" locomotive, shown here with the tender reversed, was a comparatively accurate model of the Pennsylvania Railroad's old 4-4-0 type.





C & NW ORE CAR

FULL SIZE "O" GAUGE



Garratt Locomotive

By DON WISHART

A LARGE portion of the 27,000 miles of track in Australia was laid to the 3'6" gauge, necessitated through financial limitations. Many lines were of pure development nature, having no economic justification. Track standards were not high; sharp curves and steep grades laid with light rails gave adequate permanent way for daily or bi-weekly service.

As revenue declined by the years, equipment became obsolete and outmoded, until December, 1941, when a breakdown seemed imminent. Traffic increased enormously, the routes becoming inundated overnight. Long single track sections between crossing loops were a prolific cause of delay, while the tonnage moved was small due to light motive power. Running sheds and workshops became filled with defective locomotives, a result of long deferred maintenance.

Result of this congestion was the formation of The Commonwealth Land Transport Board. It was apparent that both weight and average speed of trains had to be increased, calling for a loco of greater power output and a greater total weight. Axle loading was strictly governed by existing bridges and any strengthening program was out of the question. Obviously then, more axles had to be provided and as eight coupled machines were already inadequate, the sharp curves demanded articulation be employed.

A Garratt design, the equivalent of two of the largest then existing locomotives, was selected. The 4-8-2 type engines, permanently coupled a considerable distance apart, had the effect of materially reducing bridge loadings and gave smooth riding over undulating profiles.

Designs were then called for from engineers with a knowledge of 3'6" gauge motive power. Foremost attention was given to simplicity in construction and maintenance, and above all, the standardization of parts. When modified with suitable brake and drawgear, these engines are suitable for operation over any 3'6" gauge line in Australia. Manufacture of component parts was distributed throughout more than a hundred factories in all the States.

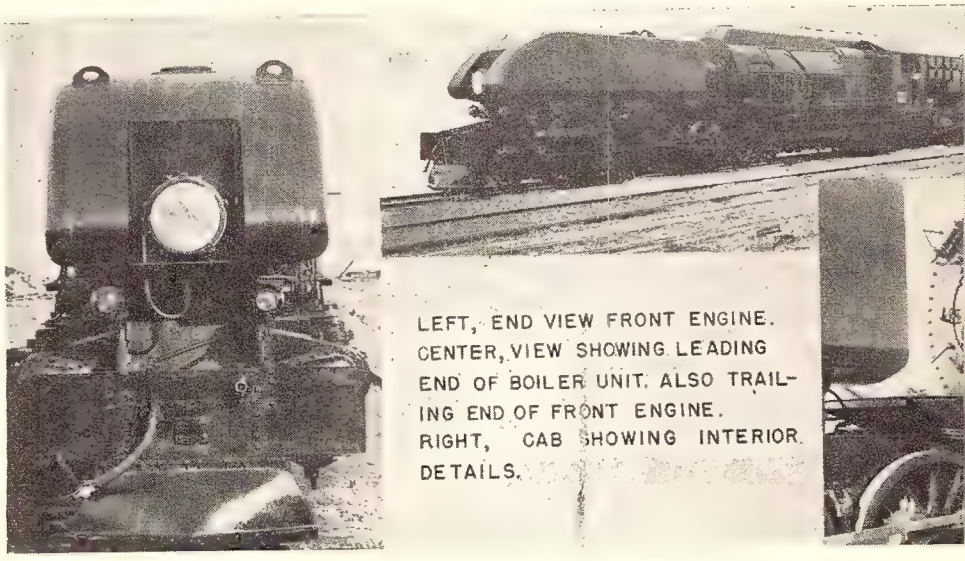
Assembly of these locos took place at Newport, Victoria, and in West Australia. Late in 1942, actual erection commenced and by the middle of 1943 the first of a total order for 65 was completed.

Basically, these engines comprise three distinct units, known as the Front Engine, Hind Engine and Boiler Unit, so arranged that the central Boiler Unit rides on the Engine Units. Heavy cast pivot centers with bronze wearing plates and oil bath are provided to cope with the severe buffing and tractive loads.

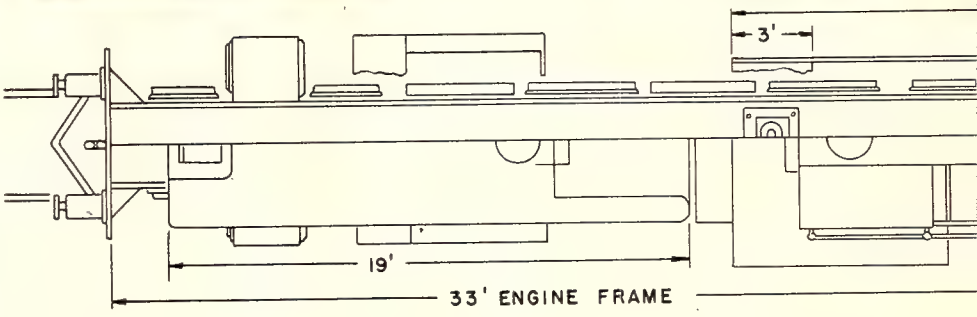
To ensure ample steaming capacity, a boiler of once prohibitive proportions was employed. Simplicity of line is apparent, cylindrical barrel and perfectly rectangular firebox being noticeable. A special Waugh-type rocking grate was used to burn various types of coal with satisfaction. A smokebox of large size, fitted with a Cyclone style spark arrestor, was chosen as the best means of having long runs without making cleanings. Ash pan is of a very large capacity, with cleaning doors at each side; raking-out may be done without the use of a pit. Air dampers were so placed that they would not be blocked by accumulation of ashes.

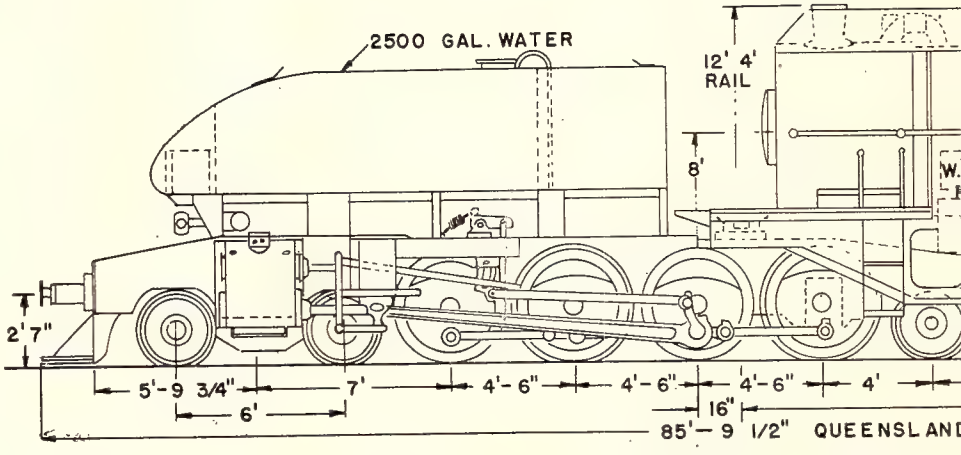
An all-welded water tank was fitted on each engine unit, the two connected by piping, eliminating one extra stop at the watering stations for filling both boilers. When first put into service, the engines were permitted to run until the tanks were practically empty. As a result, excessive weight was placed on the trailing wheels resulting in hot boxes. The policy was then revised and the tanks kept filled by watering about every fifty miles.

The boiler was domeless and steam passed through a double beat valve regulator, mounted on the smokebox end of the barrel. After passing through the superheater and out through the bottom of the smokebox, one live steam pipe enters a spherical ball joint vertically below the leading pivot center and thence to the front engine cylinders. The remaining steam pipe passes back under the boiler and ashpan via a ball joint to the hind engine cylinders. Similar arrangements



LEFT, END VIEW FRONT ENGINE. CENTER, VIEW SHOWING LEADING END OF BOILER UNIT. ALSO TRAILING END OF FRONT ENGINE. RIGHT, CAB SHOWING INTERIOR DETAILS.





are made for the return of the exhaust steam to pass out the blast pipe and stove pipe funnel in conventional manner. This large amount of piping required automatic draining valves fitted to ensure the removal of condensation.

Each engine unit is of plate frame construction, having a horizontal diaphragm plate running the entire length to which the pivot center is attached. Axle boxes of the coupled wheels are fitted between horn blocks, bolted to the frames, the load carried on underslung reverse camber springs. No equalization of any description is provided between either coupled or bogie wheels. To ensure sufficient flexibility, leading and driving coupled wheels are flangeless while large lateral travel were the bogies. This is said to have been the cause of many derailments occurring during operation.

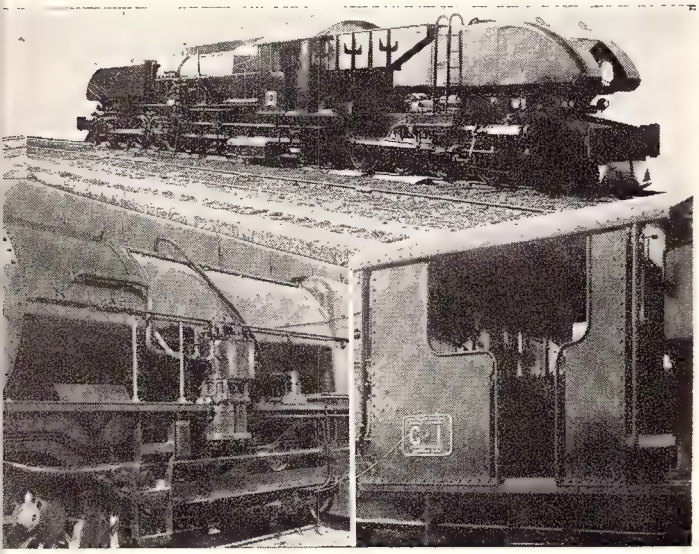
Cylinder castings are bolted to the frames and the piston valves operated by the reliable Walschaert valve gear. The choice of the Laird crosshead was made to protect the wearing surfaces from sand storm effects. The cab is the largest yet provided on the 3'6" lines, the roof being lined with wood to insulate the cab from the direct heat of the sun. Allowing for sudden tropical downpours, the cab can be closed with roller storm curtains.

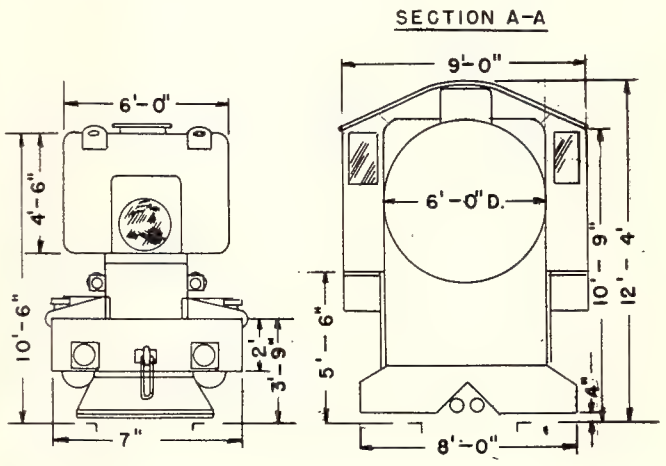
These engines were originally intended to run equally well in either direction, but the crews refused to run bunker first. It was their contention that the fireman would have to watch for signals; it was also impossible to see beyond the coal bunker. This resulted in reversing loops being constructed at every terminal likely to be used by these engines.

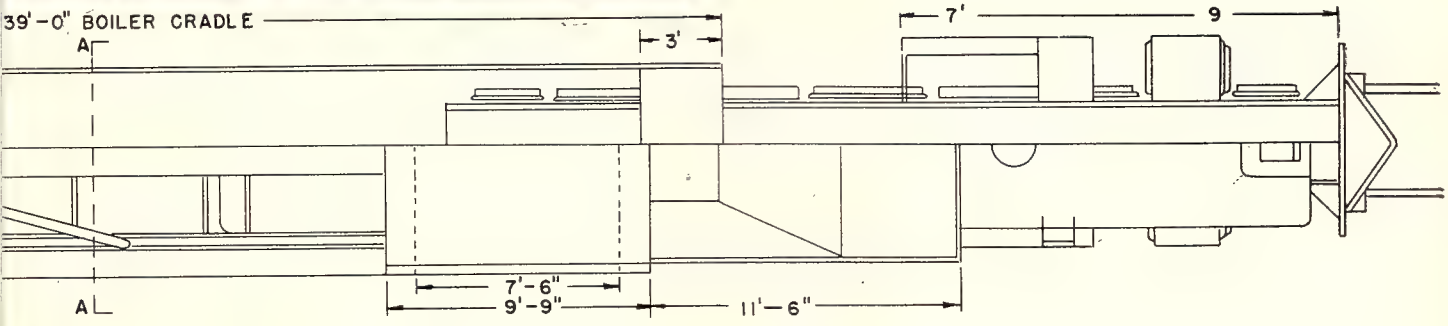
Each engine unit is braked as a separate vehicle with its own brake cylinder, auxiliary reservoir and triple valve of the Westinghouse system. Locos for use on the Tasmania and West Australia Government Railways were not so fitted but the vacuum ejector for the train brakes was placed in the cab, the engine itself provided with a steam brake.

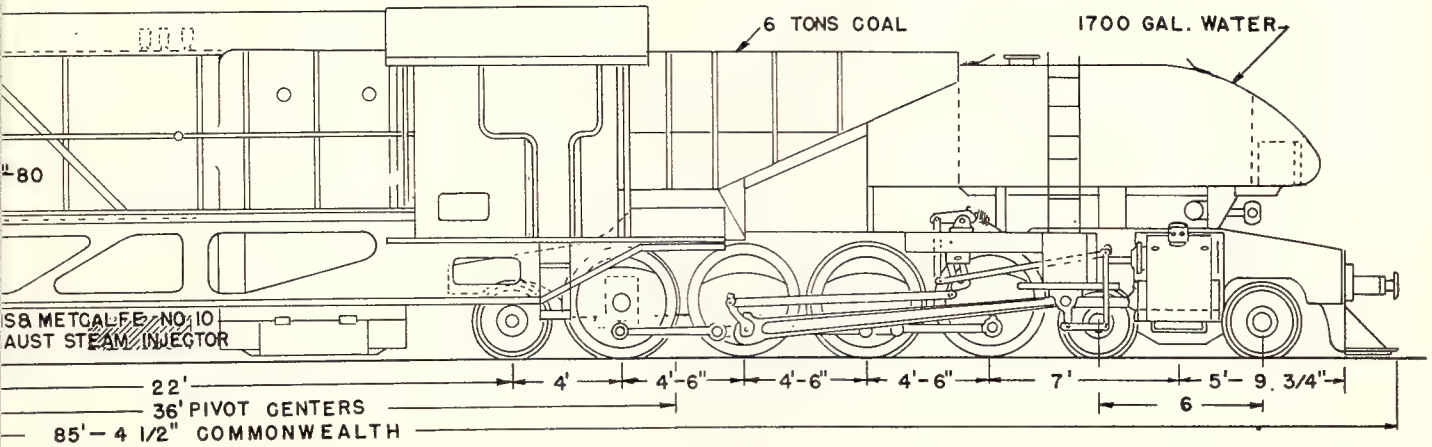
Much criticism has been leveled at these engines, covering practically every feature. Firemen had difficulty in keeping up pressure, and many derailments on curves took place. Out of the projected 65 locomotives, only 33 were actually built.

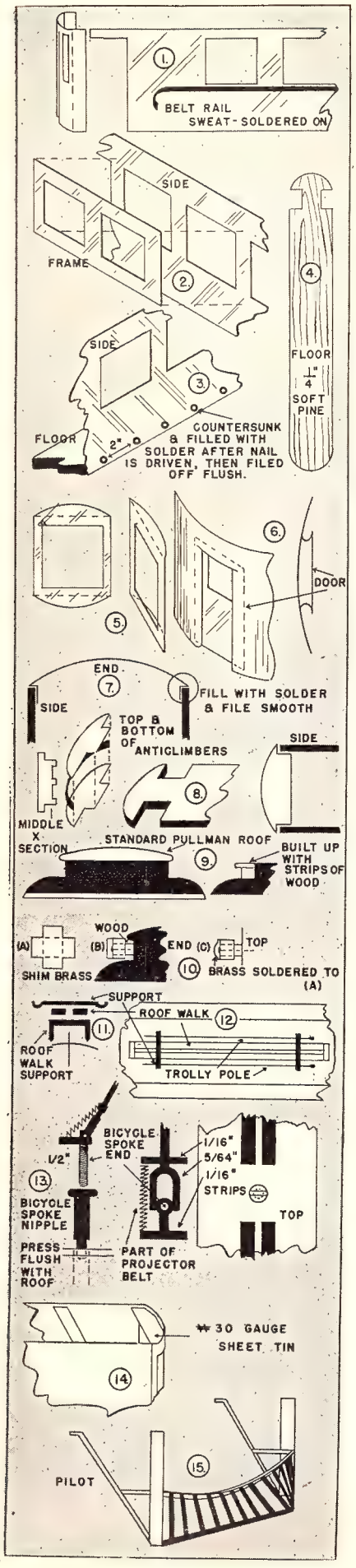
What the future holds for these engines is hard to determine. One locomotive, together with a liberal supply of spare parts, has been sold to a cement works owning a 3'6" line. Meanwhile, fifteen are idle on a siding at Rocklea, as the men refuse to work them on grounds of safety. Some sources are pressing for a Royal Commission inquiry as to why they were built in preference to types then existing and known to be satisfactory.

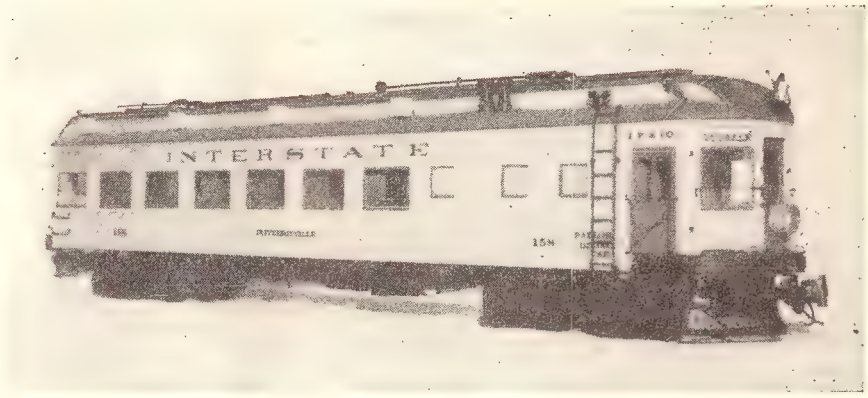












Two views of the finished model built by the author are shown both above and below.

Interurban Diner

By H. R. BLACKBURN, M.D.

THE Interstate Public Service Co., of Indiana, operated some of the most elaborate interurban equipment of any line of its day, including all-steel combines, coaches, dining-parlor-solarium cars and even sleepers with upper berth windows.

The dining-parlor-solarium cars of this series were numbered 158-161 and named respectively Jeffersonville, Edinburg, Columbus and Franklin after the towns through which they operated. Usually, they were used as the rear car of 2-, 3- or 4-car trains on the Louisville & Indianapolis run as the Dixie Flyer Southbound and the Hoosier Flyer Northbound. They were able to operate as independent units, however, since the front truck contained two 150-H.P. motors, control equipment being housed in the front compartment. Original cars were built in 1923 by the American Car Foundry plant at Jeffersonville, Ind., and were used in regular service until 1932, being replaced by the faster "Lightweights."

These cars weighed 50 tons and presented a grand appearance with their long steel bodies and large solarium windows as they rolled down the streets of Louisville and Indianapolis or sped through the countryside at 70 MPH.

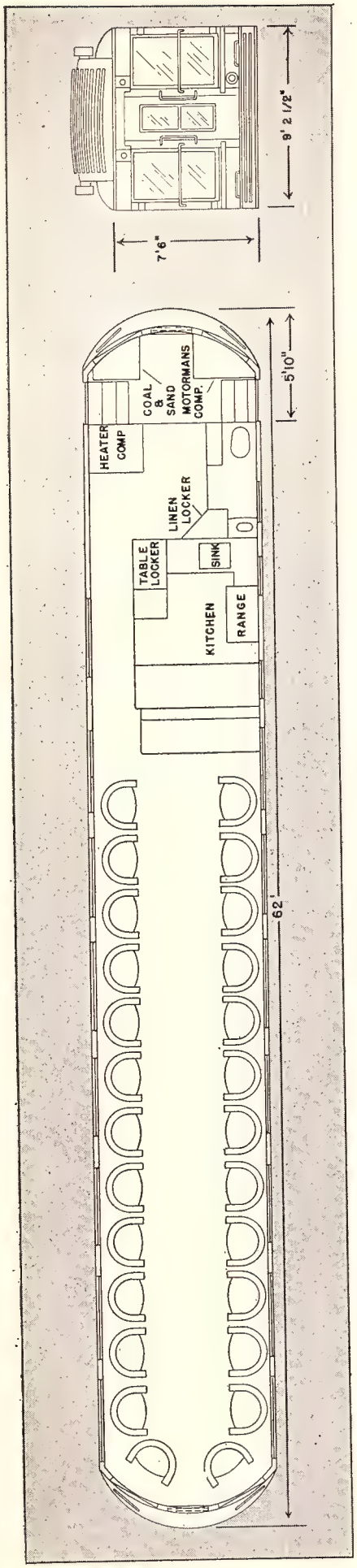
Actual construction of this model begins with laying out the sides of #22 gauge galvanized iron sheets or 1/32" sheet brass. Cut to correct size as shown. Windows and door openings are scribed in position and cut out with a jeweler's saw; dress to finish size with fine flat file.

All side rivet detail should now be added as determined from the photos. Scribe light lines on the sides which exactly correspond with rivet lines. Now by following these lines, rivets can be imprinted in exact number with a sharp punch and hammer. Note that this method gives one an imprinted rivet rather than an embossed rivet. The finished result after painting is surprisingly realistic, however, and adds to your final detail. Some may desire to omit all rivet detail, but I feel that it is worth the added effort.

Belt rails should now be added to the sides by sweat soldering them into position. Make them up from 5/32" wide strips of #30 gauge tin previously embossed with rivets.

Window frames are built up from #39 gauge shim brass, cut into 1" strips and sweated to the inner side, fig. 2. Before sweating, hold strips in proper position behind window opening and scribe lines to window outline. Dimensions for the frames should be scribed heavily on the shim brass the proper distance within the other lines. These lines can be scribed heavily enough so the center section will crack off upon gentle bending back and forth, leaving the opening for your window panes.

With all window frames added, drill #60 holes into sides for floor attachment.



Drill these about every two inches at line of floor level. Countersink holes to take ¾" wire nails. Fill in with solder and file flush with car side, fig. 3. Holes for grab irons and ladder attachment are now drilled and sides are ready for securing to floor. Floor bottom should be 1/16" above lower edge of sides.

The floor is cut from ¼" soft pine, cut out with proper recesses for steps, fig. 4. Board should be given coat of shellac and painted dull black.

Ends are built up from #30 gauge tin or brass. Window and door openings are scribed and cut out in like manner as the sides. Doors are made up from the same #39 gauge shim brass used for window frames. You are now confronted with the problem of filling in dead space between the curved ends and the straight end window frames. See fig. 5. Shim brass is cut as shown and bent to 90° angle along dotted lines, the curved portion thus fitting flush against the curved end and forming top and bottom sills. Secure in place with solder along edges at four corners.

To properly recess end doors, a 1/16" wide extra strip is left in position when cutting out the door opening. Bend strip inward to 90° angle to obtain correct door width, fig. 6. Finished ends can now be secured to the sides with solder as seen in fig. 7.

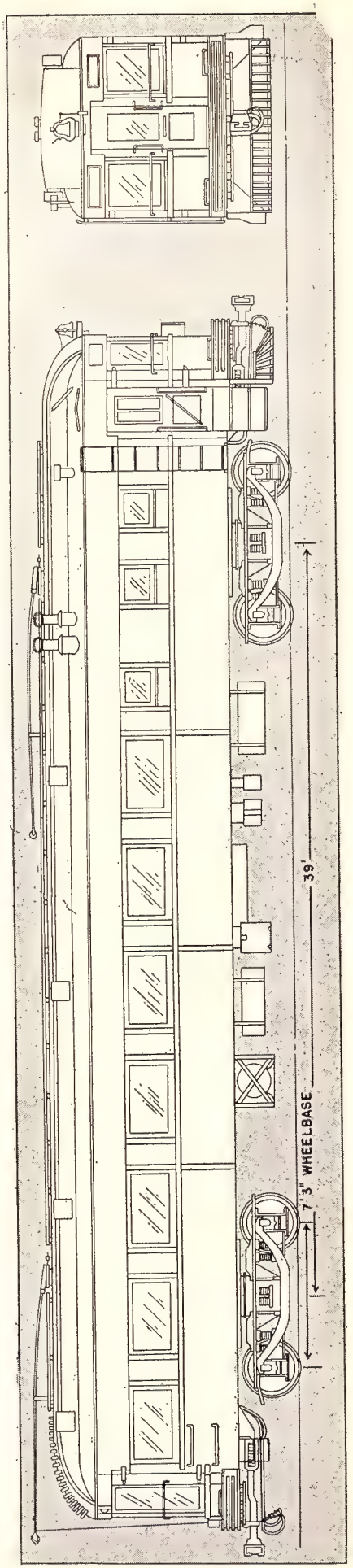
After soldering ends to the sides, attach the grab irons and solder window frames, marker brackets and end doors into position. Prepare small shim brass frames for the train number sign box and destination sign box as done for the window frames.

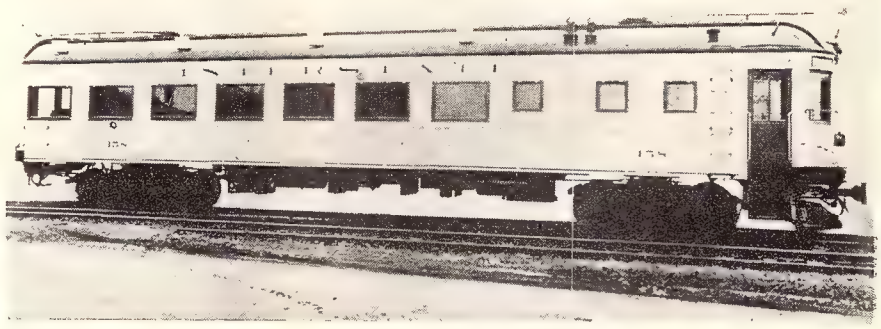
Anti-climbers are built up in three sections, top and bottom pieces from #30 gauge tin, cut to correct curvature with rivet detail added, see fig. 8. Middle section of the anti-climber can be turned out on the lathe to simplify construction.

A standard Pullman section roof was modified to fit the interurban car, fig. 9, by adding wooden strips along the clerestory and shaving off the underside as shown. Make the roof removable to facilitate reaching the motor.

Roof details consist of the roof walk, ventilators, curved roof gratings, trolley stands, whistle, belt power feed wire and chimneys, all shown on the scale plan. Chimneys are turned from wood or brass stock. Ventilators are formed from #39 gauge shim brass as shown in fig. 10. Bend flaps along the dotted lines and solder edges together. These are then secured to the roof by cementing over a square wooden section which in turn is fastened to the roof proper with either a screw or brad, fig. 10.

Roof walk is made from two 1/32" x 5/32" sections of wood or brass cut to length and placed as shown in side and end views. Shim brass caps are placed over the ends of all roof walk sections. Note that the walk is divided into three sections, these being mounted on 1/32" square metal or wood supports and cemented or soldered in place. Roof walk supports on my model were made up from brass rod 1/32" square and shaped and filed as shown in fig. 11. Drive in flush with roof.





Excellent detail can be obtained from the three different views of the prototype shown on this page.

Make the roof gratings from 1/32" square brass sections. Correct length and spacing is indicated on plan. Four stringer pieces of similar material are used as a base for cross pieces. Ends of these stringers should be filed to a point and bent to a 90° angle for securing to the roof, similar to roof walk supports. Solder the gratings to these stringers.

Two spare trolley poles are secured to the roof as shown in fig. 12, and either glued or soldered in place. Trolley poles and bases are constructed as follows: Obtain two bicycle spokes and nipples. Drill holes completely through roof where trolley bases are to be mounted. These holes should be of such diameter to have the nipples press-fitted into them. Cut off 1/2" of the threaded end on the spoke; mount trolley pole on one end of threaded portion and screw unit into nipple. (See fig. 13).

To give adequate strength to the top of the curved end sections, a piece of #30 gauge sheet tin should be cut to fit the curved section; solder flush 1/64" from top edge as shown in fig. 14. Sides also need upright support and this can be accomplished by soldering three brass cross members 1/16" below top of sides, spaced equally apart.

A kingpin drive was used in this model with a #1 K&D motor over the front truck. Power is supplied to the wheels through worm and spur gears.

Side frames for Baldwin interurban trucks are not available for O-Gauge, so to be exact the trucks must be built up from brass or have the frames cast for your own use. I preferred to build the truck up from brass parts, using only commercial bronze journal boxes cut from freight truck side frames. Real coil and leaf springs were used but were not working, however the trucks were equalized.

The pilot was built up entirely from brass. Top cross section was made from a 1/64" x 3/32" brass strip curved to form the correct shape. Side vertical pieces were made up from #26 gauge brass angles, as was the bottom horizontal section. Soldering was facilitated by first cutting a wooden form which held the pieces at the proper angle at all times while soldering pilot together. Pilot ribs were made from #24 spring brass wire. These were soldered to the top and bottom cross pieces and filed off flat at the lower end to represent the flattened appearance of the prototype.

Soldering technique determines the neatness of the finished work. Check the height of the pilot above the rail head, trim the supports to size and solder the assembled pilot to the completed body.

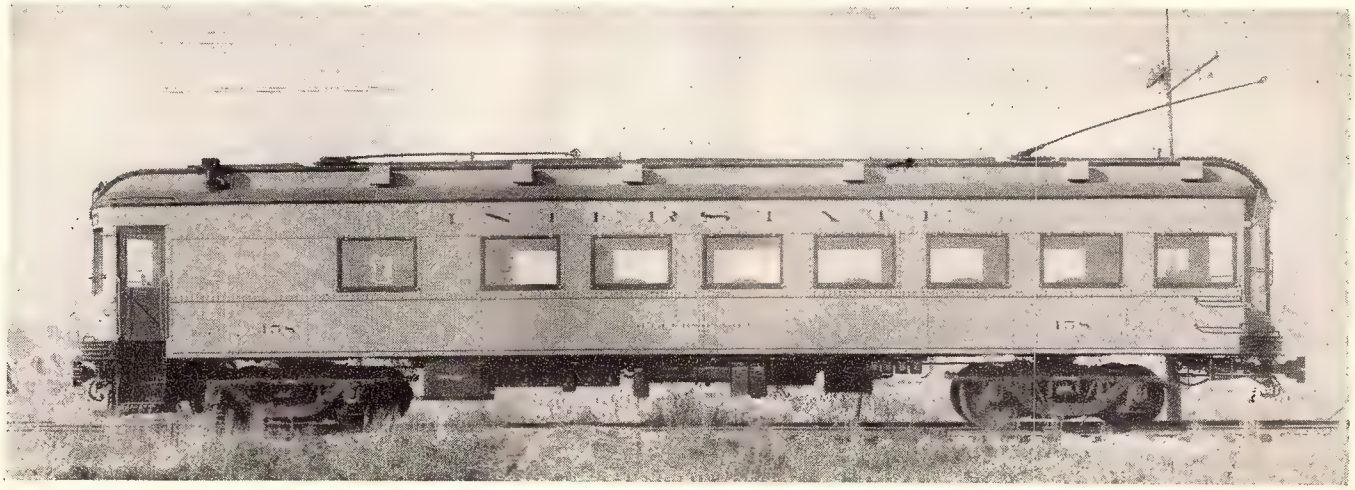
Couplers are similar to the standard steam type, except for the higher knuckle and offset shank. Dummy steam couplers were used and the major changes made by building up from solder and filing away excess to form the high knuckle and offset shank. Radial coupler supports were soldered to the floor and movable coupler pockets built up from brass and attached to coupler swing support, giving the coupler a 90° swing from side to side.

Painting was started after the complete car had been cleaned with benzine. Other methods can be used, but I have found that spraying lacquer on your model will give a uniform coating and a smoothness which is otherwise difficult to achieve. Prototype colors used traction orange on the sides, clerestory and ventilators, with maroon used on roof, doors and window frames and black underbody details, chimneys and lettering.

Windows were installed after the painting was completed. Microscopic slide glass, a real glass and not a celluloid material, was used, cemented in place, any excess cement being easily removed after drying. Kitchen windows of course, were translucent and were made up from ground glass.

All lettering can be handled properly with purchased decals except for the word INTERSTATE, which must be hand lettered.

With all the lettering completed, spray a coat of clear lacquer on your finished model and you are ready for a run on the main line!



NEW YORK LIVE STEAMERS "STEAMING"!

UP UNTIL the present time, New York has taken a back seat as far as live steam activities are concerned. But right now, the boys are "really cookin' with steam"! You New Yorkers have Bill Eliot and Joe Hamm to thank for making the safety valve pop in the N. Y. Live Steamer Society. One of their main purposes in mind was to create a group that would welcome the Live Steamer and his family.

Their first meeting was held last September in the East Room of the Railroad YMCA, 224 East 47th St., N. Y. City. After much work and organization, their constitution and by-laws were adopted late in the fall, with the election of officers.

The boys are pleased to announce that they can offer you Live Steamers the following attractions: (1) Three acres of flat, level land for an outdoor track. (2) An 800-ft. track, with many future possibilities. (3) A 100-ft. siding and an 8-stall Roundhouse. (4) Picnic benches for members and families. (5) Only ten-minute walk to private bathing beach. (6) Use of shop with machine tools for repairs. (7) Overnight accommodations. (8) Meal accommodations. (9) Site accessible by Long Island RR, or by car on State Parkways. This track site is located on Sunrise Highway, between Wantagh and Massapequa, L. I., just behind Jerry's Hotel. Construction program calls for 800-ft. loop for ¾" and ½" scale locos. Joe Dobler now has a friend working on the trestle frames and by early spring the N. Y. Live Steamer Society should be able to drive the Golden Spike.

Other Live Steamers should sit up and take notice. New York is aiming for the "driver's seat" and is getting there fast! Drop in and pay the boys a visit. Drive out the Northern State or Southern State Parkway. Get off at Jones Beach and Sunrise Highway; the track site is only two miles farther out on the island from this point.

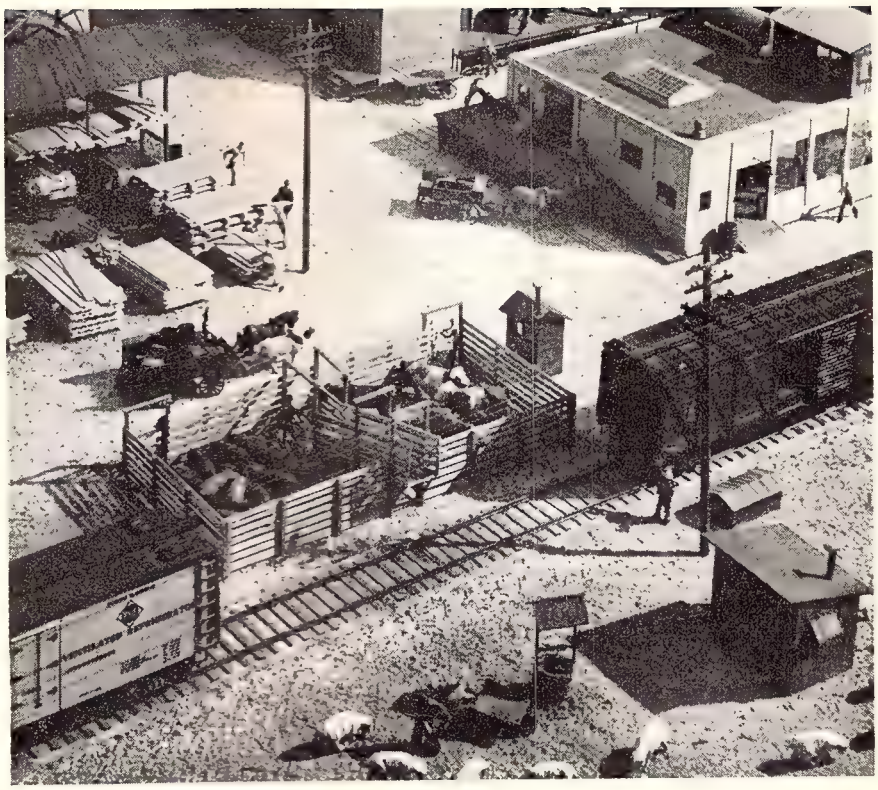
NEW OUTDOOR LAYOUT FOR TORONTO LIVE STEAM

SINCE the formation of the Toronto Society of Model Engineers in Nov. 1932, the members have been on the lookout for a suitable location not too far from the city of Toronto on which we could lay out about 500 to 1,000 feet of track, preferably near a creek or river which might give possibilities of a power boat pond. We recently obtained a lease on 2½ acres of land through which runs a small stream, the whole area being within seven miles of Toronto. Ultimately, this section is to become a recreational area for the district, so all plans have been made with this thought in mind.

Our track layout now consists of 527 ft. of continuous track, 250 ft. of spur and roundhouse for a total of 757 ft. of 2½" and 3½" gauge track. Due to the climatic conditions in this section, it was necessary to erect the track on cedar posts sunk to a depth of 3½ ft. to get below frost level. The posts were spaced an average of 6 ft. apart, with the stringers on which the ties rest consisting of 1" x 6" x 12' dressed spruce. Creosote paint was applied to minimize water effect. The stringers were placed two on each side of the posts with the joints staggered so that on the curves a continuous curve is the result, with the strength of a 2 x 6 stringer on each side of the post. This provides ample strength for the loads which are expected to be carried.

The rail is made from ¼" x 1" steel strip stood on edge and this is welded to cross ties of T section steel every 18". The T section has a hole drilled in the center and a hook with a spring on the end of it which has been passed through a channel iron section. This is fastened to the bottom of the stringers holding the T section, and consequently the rails down into slots cut in the ties. The steel rails are welded at the joints thus making a continuously welded track. To allow for

(Continued on page 45)

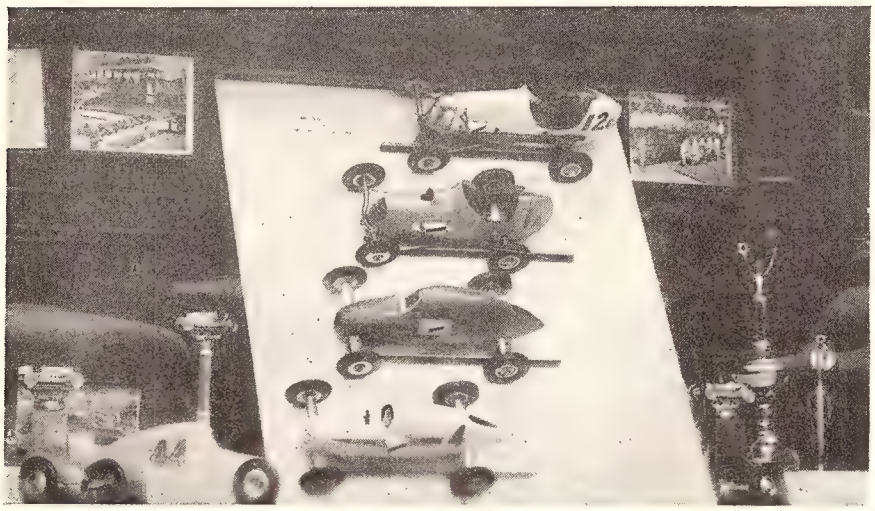


Action and minute detail on the HO layout of John Allen, Monterey, Calif. Notice that "natural" appearance which predominates this scene. Every figure, every structure, every freight car tells his own tale—they each have their own job to do!

Cleveland Plain Dealer

These two are real interurban fans, just by looking at the finished models. Lester E. Ruff (left) admires a big model of old car #53 of the extinct Eastern Ohio Traction Co., representing one year of modeling by Leonard Noon, South Euclid, Ohio. Smaller models are the work of Ruff.

MINIATURE RACING CARS



CMRCA window display on view at the National Bank in Chicago Heights.

KEEPING UP WITH CHICAGO

By FRANK PAWLIKOWSKI

"ALL the thrills of regulation auto racing, but minus the injuries and death"—that just about sums up the sport of racing miniature rail cars. There is no other racing as competitive as rail, for each and every car qualifies for its post position. In this manner, all cars are evenly matched. The writer recalls many a day when the entire streamline field qualified within four miles and one can imagine the close competition that a field like that holds.

With the winter months gone, some of the boys will be getting their cars back from the annual traveling winter display. Three winters ago, through Mr. Thompson's efforts, several cars, trophies and showcards explaining these models were exhibited in Berwyn, suburb of Chicago

The following year, Joedy Laschiavo undertook the task, and had a large display on Michigan Ave. in Chicago. This year's exhibit was undertaken by Bob Buratto and Carl Widen. Two of the cars in this exhibit hold world rail records. Number four, owned by Willie Weller, a streamline car, was timed at 80.09 MPH for a quarter mile run. Number 1-A, conventional type, owned by Clyde Rohrer, was clocked at record time of 76.40 MPH in last summer's Nationals. Exhibit was displayed at First National Bank of Chicago Heights and M&G Hobby Shop of Chicago.

This brings in quite a number of inquiries as to *how, where*, and *why* they run. It also attracts many people who will keep in mind the coming show this year.

Ed. Lipski has labored for the last ten months on a super duper timer, which does everything but give hot and cold running water. This timer is not completed as yet, but just as soon as it is finished, a complete article will be devoted to this wonderful instrument.

The CMRCA hold their meetings the first and third Fridays of each month at Gage Park field house, 55th and Western Ave. All visitors are welcome.

L. I. A. R. S. HOLD ELECTION

LONG ISLAND AUTOMOBILE RACING SOCIETY held their anual election meeting on January 6th, electing the following officers: President, Frank Wolf; Vice-President, Wilbur Martine; Treasurer, George Busch; Secretary, Charles Drower; Sgt.-at-Arms, John Hoffman. Wilbur Martine will continue to act as Referee. The new Secretary may be contacted at 3126 93rd St., Jackson Heights, New York.

Roy Springfield of Chicago with his No. 54. Due to Roy's diminutive stature, he is known to the boys as "The Little Boy in a Hole."

PRESENT SPEED RECORDS

THIS is your standing box score representing AMRCA speed records as of January 1, 1947. These are the present existing records as reported to this office, showing highest speeds established on both cable and rail tracks, type car and engine used, together with location and date of established record:

1/16th MILE CABLE TRACK

SPUR (¼ mile): Dick McCoy, San Francisco, July 7, 1946—116.73 MPH (McCoy Car, McCoy Engine)

PROTO (¼ Mile): Howard Lee, San Francisco, July 7, 1946—108.95 MPH (Own Design Car, Hornet Engine)

STREAMLINE (¼ Mile): Jim Gilmore, San Francisco, July 7, 1946—103.32 MPH (Special, Hornet Engine)

1/24th MILE CABLE TRACK

SPUR (¼ Mile): Fred Luning, Long Island, Sept. 1, 1946—118.73 MPH (McCoy Car, Hornet Engine)

SPUR (½ Mile): Warren Borden, Detroit, Aug. 1, 1946—115.97 MPH (V-Car, Hornet Engine)

SPUR (1 Mile): J. Crossan, Detroit, Aug. 2, 1946—113.38 MPH (V-Car, Hornet Engine)

PROTO (¼ Mile): Dale Martell, Waukegan, Ill., Sept. 1, 1946—113.21 MPH (Own Design Car, Hornet Engine)

PROTO (½ Mile): Howard Lee, Detroit, Aug. 1, 1946—107.97 MPH (Own Design Car, Hornet Engine)

PROTO (1 Mile): Howard Lee, Detroit, Aug. 2, 1946—109.02 MPH (Own Design Car, Hornet Engine)

STREAMLINER (¼ Mile): Jim Gilmore, Detroit, Aug. 3, 1946—104.98 MPH (Special, Hornet Engine)

STREAMLINER (½ Mile): Jim Gilmore, Detroit, Aug. 1, 1946—102.50 MPH (Special, Hornet Engine)

STREAMLINER (1 Mile): Jim Gilmore, Detroit, Aug. 2, 1946—100.44 MPH (Special, Hornet Engine)

1/16th MILE RAIL TRACK

STREAMLINE: W. Weller, Chicago, Aug. 25, 1946—79.30 MPH (Hornet Engine Used)

PROTO: Clyde Rohrer, Chicago, July 18, 1946—76.40 MPH (Hornet Engine Used)

HOW TO BENEFIT MOST BY AMRCA MEMBERSHIP

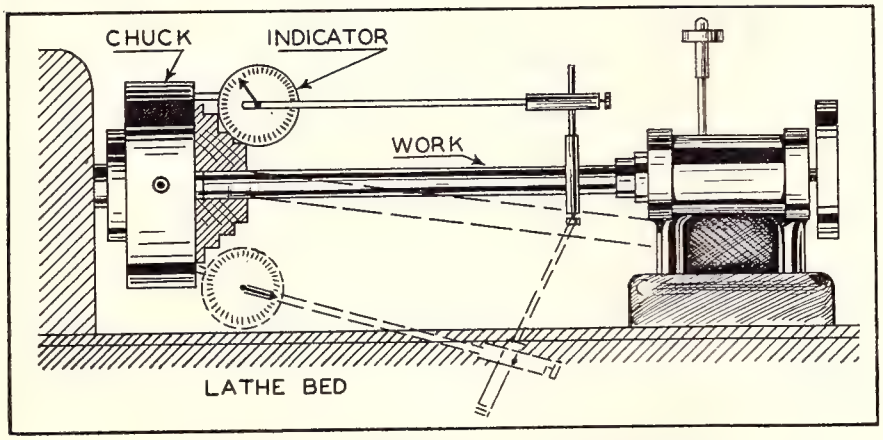
By E. D. FITZGERALD
Acting Secretary, AMRCA

MOST successful associations are composed of charters, clubs, posts or other groups that support a central office of National Officers, Directors or Representatives. Annual conventions are held and delegates from each club or district carry out the will of the individual member. Is there any valid reason why your local club cannot support the AMRCA in like manner? If you are now a member of AMRCA, make your voice heard in local meetings by proposing to your club that it affiliate itself with the National Association thereby deriving the following benefits: Present regulations allow any club with 50% of its members in AMRCA to register at the low fee of $5.00 per club. Said club can then appoint one of their members as a Referee who is responsible to the AMRCA contest board on race rules and track safety. Sanctions are granted to member clubs at no charge and they may have as many sanctions as requested.

This referee or a qualified representative or club delegate will vote for the entire club at the National Convention. This procedure will enable each member to voice his ideas on all rules, regulations and amendments. There are at present, over one hundred known clubs in the United States, yet only about twenty-five are registered. This indeed is a very poor support of AMRCA. Is it small wonder that we hear of so many complaints that the AMRCA does not do this or that? First get behind your own club and instruct your elected local officers to register your club so that present rules can be enforced 100%. When AMRCA truly represents all active clubs in the country, then the revenue will be sufficient to really support and encourage new clubs and carry on essential promotional work. Let us review the publicity gained by diligent and determined work by your national officers. In addition to the wonderful cooperation rendered each month by MODEL CRAFTSMAN, pictures have appeared in Science Illustrated (May issue), Popular Science, Popular Mechanics (June issue), Pageant, Parade, People and Places, Air Trails, Liberty, and numerous newspapers.

This type of promotional work takes considerable time, effort and money. Letters sent in by readers and enthusiasts have to be answered and these requests run into the thousands from one article alone. This gives us an opportunity to contact a prospective fan and place him in communication with the Club Secretary nearest to his city or home.

It has been suggested that any club with 100% AMRCA membership become permanently affiliated with no additional yearly dues. The club can then afford to guarantee to the National Association that they will maintain 100% membership in the American Miniature Race Car Association. This can be done by sending the National Secretary a list of all local club members and their individual dues can start on the same date.



TRUE DRIVE SHAFTS

DUE to the desire for greater speeds in the miniature race car world, the drive shaft has become very important. A loss in speed of from 5 to 10 miles per hour can easily result from an *out-of-round* drive shaft.

In setting up the material in the lathe, chuck only from ¼" to ⅜" in the chuck, and set the steady-rest as far from the chuck as possible, leaving just enough material for the wheels and nuts.

Clamp an attachment around the axle to hold an indicator, as close as possible to the steady-rest and still permitting it to turn. Indicate the axle at the chuck and have it run true. Clamp the indicator to the attachment so that it touches the face of the chuck.

By revolving the axle by hand and checking the indicator at quarter turns, the steady-rest can be adjusted until the indicator reads the same at all points as the axle is rotated.

This method eliminates any guesswork and will remove the possibility of loss of speed due to a *non-concentric* axle. . . . *"Woody" Woodward.*

THE MID-WEST REPORTS

By JOE ADDISON

WELL, fellas, it seems that I kinda slipped or something, with turkey and Santa Claus all staring me in the face. Racing has been a bit out of season with snow from ankle to a foot deep. Anyhow, who is going to be able to keep the fuel warm enough to get it to run after the car is laid on the track. Temperatures of 20 to 25 below zero are just a trifle on the chilly side and it practically drives a fellow to the basement workshop whether you want to go or not.

Judging from remarks heard around the local hobby shop, it seems that there need not be any driving done. In fact, some of the jovial remarks that have been made would almost call for a shooting if one was a "two-gun Pete" er something! With such remarks as, "my go-quick fuel will sure leave you in my dust" and "that old 'junk wagon' won't even qualify," makes a fellow want to bite into nails. If you don't think that things are going to happen, just hop into the family jalopy, drive down the streets about 9:00 P.M. and look at the basement lights all glowing, and you will change your minds. There are going to be some records broken and some mighty good fellowship rendered in this new year of 1947. The Salina Club wishes everyone interested in racing a very Happy and Fast Racing Season!

AMRCA SANCTIONED MEETS FOR 1947 SEASON

DURING the year 1946 the AMRCA sanctioned some thirty race meets. In order that this coming season may be planned correctly, please send your requests for race dates and sanctions no later than April 1st This magazine will feature a boxed list each month. Please cooperate by mailing this information to the AMRCA Contest Board, c/o Secretary E. D. Fitzgerald, Hotel Governor Clinton, 31st & 7th Ave., N. Y., N. Y.' Following dates have been tentatively set:

March 23	Pacific Beach, San Diego Calif.
April 27	Danville, Illinois
April 27	Lafayette, Indiana
May 11	Lafayette, Indiana
May 25	Champaign, Illinois
May 25	Trenton, N. J.
May 30, 31, June 1	"Little Indianapolis," San Francisco, Calif.
June 1	Trenton, N. J.
June 8	Kankakee, Illinois
June 8	Kearny, N. J.
June 22	Long Island, N. Y. (Championships)
June 22	Rock Island, Illinois
July 6	Eastern Regionals; Mid-West Regionals at Waukegan, Illinois; Southern Regionals; Western Regionals.
July 20	Indianapolis, Indiana
Aug. 1, 2, 3 or 4	Nationals (location to be decided by popular vote)
Aug. 3	Harvey, Illinois
Aug. 10	Long Island, N. Y.
Aug. 17	Hartford City, Indiana
Aug. 30, 31	Detroit, Mich. (Midwestern Champ.)
Sept. 1	Harold Loose Memorial Race
Sept. 14	Peoria, Illinois
Oct. 11, 12	San Francisco, California

Above dates and locations are subject to change by request of clubs concerned. Only two bids have been received from Clubs on Regionals and Nationals. Please send formal bids to AMRCA Contest Board.

PHOENIX BOYS START TO ROLL!

THE Phoenix Miniature Race Car Association, Phoenix, Ariz., is now running and invites everyone from "their neck of the woods" who is interested in racing to contact their Secretary, T. Webster, 934 E. Van Buren, Phoenix, Ariz. Their cable track (1/24 mile) is located at Sky Harbor Airport.

High speed to date is 107.14 MPH, established by Bob Graham with a Hornet V-Car.

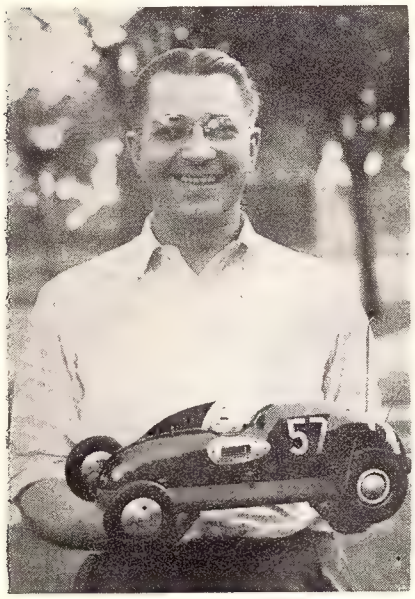


Photo by Leo Barnes

Erv Kohloff, 1946 second place high point standing winner, with his streamline D & M Special. Milwaukee Rail Club.

MEET MILWAUKEE

By BILL DECKER

THIS month we introduce Erv Kohloff, a brand new member of the Milwaukee Club in 1946. Erv is a fellow worker of mine out in the Engineering Dept. of Bucyrus-Eire Co. Although new to model race cars, he is not new in the model game, being very prominent in the model airplane field. His experience in building top notch planes has proven worth while in his newly chosen hobby.

Erv purchased a D & M Special and with a little help from yours truly made a winner out of it, copping second place in point standing for the 1946 season. There's a knack to racing a rail car and it usually takes several years to get into the swing of things, but not so with Erv. He took hold like a veteran and pushed his way to the top. Lacking a machine shop to make his parts, he has done remarkably well. Since finding out how much fun there is in rail racing, Erv has more or less let his planes gather dust. He has great hopes, however, of completing a U-Control that will do 150 MPH. The job is already started and looks real hot.

Erv does very neat work, having one of the best looking cars on the track, as well as one of the fastest. Not many feature races were run without that orange No. 57. Since taking this picture, there has been a re-shuffling of numbers and Erv now holds No. 78. We all look for plenty of competition from him next season as his motor, new last season, is ready to open up. Good luck, Erv, let's hope you get that 80 you're shooting for!

MOUNTAIN STATES REGIONAL NEWS

By JOE ADDISON

IT definitely appears that racing is going to take on a new cloak during 1947 in the Mid-West States. Just to let you in on some of the progress, we will be glad to say that Tulsa, Oklahoma, has a new cable track for 1947. Watch this club, for they should come out with some fast speeds. Wichita, Kansas, is putting in a new track, with some of the old timers lending a hand. This promises to be a good track and there will not be many who will exactly be dragging their drive-shafts, either!

Except for an occasional blowout or something, the club from Pueblo, Colorado, will be doing some real high altitude racing. The Denver Club has good assurance for a new track which we hope will be well built and send the Denver boys to an all-time high with high altitude racing. If you fellows don't think this altitude makes much difference, just drop in at Denver or Pueblo and try your luck. You'll be greatly surprised!

The boys from Kansas City, Mo., say they will have a new track this year also, and with this swell club of racers you can be certain of a good reception. They are not exactly what you would call *slow*, either, so clear the track and let 'em roll, KC! That grand bunch from Lincoln, Nebraska, are going to go to town this year. We didn't hear much from them in 1946 but look out now! The Omaha gang really plans to turn them loose this year and see what they can do, so it looks like there will be good competition in ye old state of Nebraska.

The Phoenix Club is out to burn up the track this year. With some of their old gang back with new energy, things really should hum. "How about it, Phoenix, are you having that State Race this year?"

The Mountain States Region invites all of you to get out those old field glasses and watch the "Hot Irons" roll by, don't we, fellas?

Size of Taper Pins and Their Starting Drills

By Bill Decker

Number	7/0	6/0	5/0	4/0	3/0	2/0	0	1	2	3
Diameter at Large End	.062	.078	.094	.109	.125	.141	.156	.172	.193	.219
Length		Diameter of small end of pin and drill size.								
1/4"	.0573 54	.0728 50	....	....	....	....	....	....	....	....
3/8"	.0547 55	.0702 51	.0862 45	....	....	....	....	....	....	....
1/2"	.0521 56	.0676 52	.0836 46	.0986 41	.1146 34	.1306 30	.1456 9/64	.1616 5/32	....	....
5/8"	.0495 56	.0650 52	.0810 5/64	.0960 3/32	.1120 7/64	.1280 1/8	.1430 9/64	.1590 23	....	....
3/4"	.0469 56	.0624 53	.0784 48	.0934 43	.1094 36	.1254 31	.1404 29	.1564 24	.1774 11/64	.2034 8
1"	....	.0572 54	.0732 50	.0882 44	.1042 38	.1202 32	.1352 30	.1512 26	.1722 19	.1982 10
1 1/8"	....	....	....	.0856 45	.1016 39	.1176 33	.1326 30	.1486 27	.1696 19	.1956 11
1 1/4"	....	....	....	.0830 46	.0990 41	.1150 33	.1300 1/8	.1460 9/64	.1670 20	.1930 3/16
1 3/8"	....	....	....	....	.0964 3/32	.1124 7/64	.1274 1/8	.1434 9/64	.1644 20	.1904 3/16
1 1/2"	....	....	....	....	.0938 43	.1098 36	.1248 31	.1408 29	.1618 5/32	.1878 14
1 3/4"	....	....	....	....	....	.1045 38	.1195 32	.1355 30	.1565 24	.1825 16
2"	....	....	....	....	....	.0993 41	.1143 34	.1303 1/8	.1513 26	.1773 11/64

HOT RODS

WITH miniature "Hot Rod" racing growing more popular every day on our cable tracks, ye editors decided to learn the fascinating history of this quaint car, and determine the reason for this popularity. This model car, an exact replica of its big brother, has been scaled down 14 to 1, and is now knocking out speeds well above 90 MPH. Prototype of this car belongs to Troy Ruttman, of Ontario, California, who has 16 straight wins to his credit on the half-mile dirt track at San Bernardino, Calif. Troy also holds track records from two other tracks and is considered one of the most consistent money-winners in big time Hot Rod racing today. But let's delve into the history behind this type racing.

It all started back in 1930, when a few speed-minded youths got together with their "hopped up" Model T's and staged some hair-raising races up and down the public highways of southern California. Something had to be done to curb these young speed demons from becoming a menace to the motoring public. Youth-minded officials of southern California decided to secure a place where these boys could try out their speedy mounts under adult supervision, ensuring the safety of both contestants and race fans. Result was the start of monthly races at Muroc Dry Lake, California, where these speed pilots pushed their "charges" down a measured mile strip. Each run was electrically timed by the Timing Association, under whose supervision the races were conducted. Cars raced against time only, each car making two one-mile runs, each in opposite directions, the times of these runs being averaged to determine final best speed. Before entering the racing strip, each car received a rigid inspection to insure safe operation at high speeds. Drivers had to be at least 18 years old, paying $3.00 to enter his car in each race. Trophies and merchandise were awarded to the boys turning in the highest speeds.

This type racing continued until about 1940, ten years of successful racing on the flat bed of Muroc Dry Lake. The sport had grown by leaps and bounds, from 15 entries to well over the 150 mark. Speeds kept mounting; cars changed from Model T's to A-V8's and even some special built racing motors were used in the old Ford roadster chassis. But the "Hot Buggies" were still composed of an old Model A roadster body with wire or disc wheels, larger wheels in the rear. Tire sizes were different on almost all cars; gear ratio was the owner's own secret. Each car had one bucket seat with safety belt; only one or two instruments would be found on the dash. Some have pressure on oil and gas, others didn't bother. From one to four special carburetors were used. Motors were usually the $10.00 junk yard variety which were built up by degrees (dependent upon the weekly allowance of the young speed merchant). All of the parts going together to make up a complete car were usually held together with a quantity of good old bailing wire. Then, upon complete assembly, we have the famous "Hot Rod."

In order to compete in the races at the dry lakes, these teen-aged pilots next borrowed sufficient dough for a crash helmet and pair of goggles, plus enough extra for his entry fee. Then, if the car didn't fall apart before arriving at the scene of speed trials, the proud owner would probably come home with a quart of "Pure Motor Oil" as a prize for months of "coolie labor on his Hot Clunker."

Then war was declared, the Army took over Muroc Dry Lake and Hot Rod racing came to a screeching halt, with most of the young drivers joining up with the armed forces. Five years elapsed, the war was over, and once again speed entered into the veins of the Southern California youth. But this time, there was no dry lake for racing as Muroc was still in Army hands. So back again to the public highways went the Hot Rods, just as their speed-minded brothers had done fifteen years before them. This was an entirely new crop of throttle pushers as the old-timers, having gained good experience at Muroc, were now professional drivers of the Mighty Midgets and big Race Cars. Again, the Southern California Timing Association came to the rescue, obtaining El Marage Dry Lake, where the boys could carry on their racing. Here they set up their electric timing devices and the races now operate as they had done years before. New designs in both motors and cars have made their appearance and speed records have jumped up immensely. The Hot Rod speed record now stands at 127 MPH for a complete run, 131 MPH the highest speed ever turned on a one-way run. Both records were recently established by Randy Shinn, of Pasadena, Calif.

Cars now in use run from old vintage Fords to more modern Mercury A-V8's, some cars using motors taken from different make cars, the more popular being the Ford 4, 6 and 8 cylinder, Packard and Cadillac V-8. Many cars cost the owners as little as $200 while others go as high as $3500. These jobs are all built to the owner's fancy, some wanting good looks and others wanting speed, but the high priced cars do not always pay off in MPH's as the old Model A is still the car to beat!

During the past year, interest has grown sensationally, to a point where several big race car promoters are staging weekly races where these Hot Rod boys can battle it out on either ½ or ⅓ mile dirt tracks. Drivers received 40% of the gate receipts which goes toward upkeep on their cars.

The California Roadster Association was formed in July, 1946, training new amateur drivers for track racing and improving designs now used in hopping-up stock cars. In the very near future, the association expects to expand so there will be a nation-wide circuit of C.R.A. Drivers and Roadsters. At the present time, weekly "Ash Can Derbies" are being held at three Southern California dirt tracks.

This is the romantic history of the "Hot Rod," a history chuck full of human interest and speed which has paved the way for a new type car in the model race car world. . . . *Information by W. White.*

CHICAGO PERSONALITIES

By BILL DECKER

I GOT to thinkin' the other night that there was going to be one guy left out of that *Chicago Personalities* column, one fella that every MC reader would like to know. He wouldn't write it himself, so somebody has to take over. He's Jimmy Thompson! Fellas, if you don't know Jimmy, you've got a treat coming the next time you're down Chicago way. Without a doubt, he's Chicago's No. 1 energy man. Frankly, I don't think he ever goes to bed. He's always down in that shop of his, which by the way is really a shop, working on one thing or another.

REGISTER

with

AMERICAN MINIATURE RACING CAR ASSOCIATION, INC.

Headquarters: Hotel Governor Clinton
New York City, N. Y.

E. D. Fitzgerald, *Secretary-Treasurer*

Join the Association that has promoted and sanctioned more races than any other organization. Join the group that has formulated rules and regulations which are recognized by all leading miniature race car clubs.

Become a member with the hundreds of fans who attend regular sanctioned meets yearly. Place your name on the list that receives notices of important race meets. Associate yourself with the finest of amateur sportsmen.

The A.M.R.C.A. formulates rules and regulations by popular vote and is the recognized governing body of model car racing in this country. It strives for the forming of new clubs, construction of modern, safe tracks, both rail and cable, and advises on club organization. Certificates of performance are issued for winning contestants. Regional and National records and championships are rewarded with valuable prizes. Only A.M.R.C.A. members may compete.

MAIL THIS COUPON

Application for MEMBERSHIP
in the
American Miniature Racing Car Ass'n

I hereby make application for membership in the American Miniature Racing Car Association for the term of .... year, and if accepted, I hereby agree to promote, abide and uphold all rules and regulations of the competition committee of the Association.

Please send me Rule Book, Gold-plated Lapel Pin, Sanctioned Race Meet Pit Badge and my membership card with official number.

I am enclosing the sum ..... for membership fee. ($2.00 per year)

NAME .....

ADDRESS .....

CITY..... STATE.....

Photo by Decker

He needs no introduction to most race car fans—It's Jimmie Thompson, of the Chicago Rail Club, and his famous 12C Conventional.

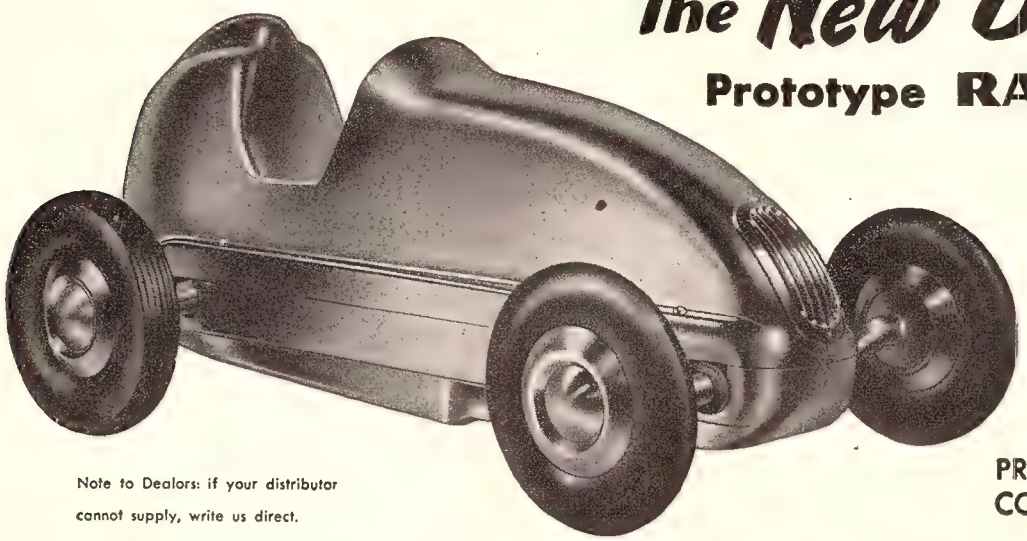
We have all heard of "Jack of all trades and master of none." Well, Jimmy is living proof that the guy didn't know what he was talking about. Everything Jimmy does, is done the best. He has so many hobbies that I would probably miss half of them. He's a crackerjack on anything electrical, you've all seen the kind of pictures he takes, watch repairs are a cinch for him, welding and wood working come second nature, model airplanes, model race cars and now a big midget!

Jimmy is with the Electro-Motive Div. of General Motors and holds a very responsible job. Anyone knowing him can see why. If you were walking up a certain street in Cicero some night and just happened to pass a house with a big 1922 on the front door, I'm sure you would notice the house well lit up, particularly the basement. And if you got real nosey and peeked through the window, I'd bet my last buck you'd see Jimmy workin' away at his machines, busy as a bee. That shop—it's a model maker's heaven—lathe, drill press, shaper, power hack saw, grinder and buffer, band saw, air compressor, milling machine, gas and electric welders and all the hand tools imaginable. Nuts, bolts, pins, gauges, indicators, mikes, surface plates and so many others it would take all night to name them! And most important, Jimmy knows how to run each and every machine he owns and good! The best tool in the world is no good unless you know how to use it.

Jimmy knows model cars and motors. I can hear him now, "Why, Bill! I don't know anything about those little cars and motors." But he's a-fibbin' and I can prove it by the records. He was No. 1 man so long in the conventional class down there that I thought the other fellows were going to give up. Since he started his Midget, he hasn't had as much time to work on models. But if you're ever in a race with him, better have your car running tops!

Then there is Mrs. T., and there's a wife! Every Christmas means a new machine for Pop. All the boys around Chicago know Mrs. T., for wherever Jimmy is, she is there, too. Whenever the boys have a job requiring a feminine touch, Mrs. T. is right there to do her share.

The New Dooling
Prototype RACE CAR



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The Finest in Race Car Design and Workmanship

BALL BEARING DRIVE UNIT • BALL BEARING FRONT WHEELS
DOUBLE UNIVERSAL AND FLYWHEEL INCLUDED • KNEE ACTION FRONT END SUSPENSION
WHEEL HUBS MACHINED FROM DURALUMIN BAR STOCK AND BALANCED
BODY -- 2 PIECE DIE CAST MAGNESIUM

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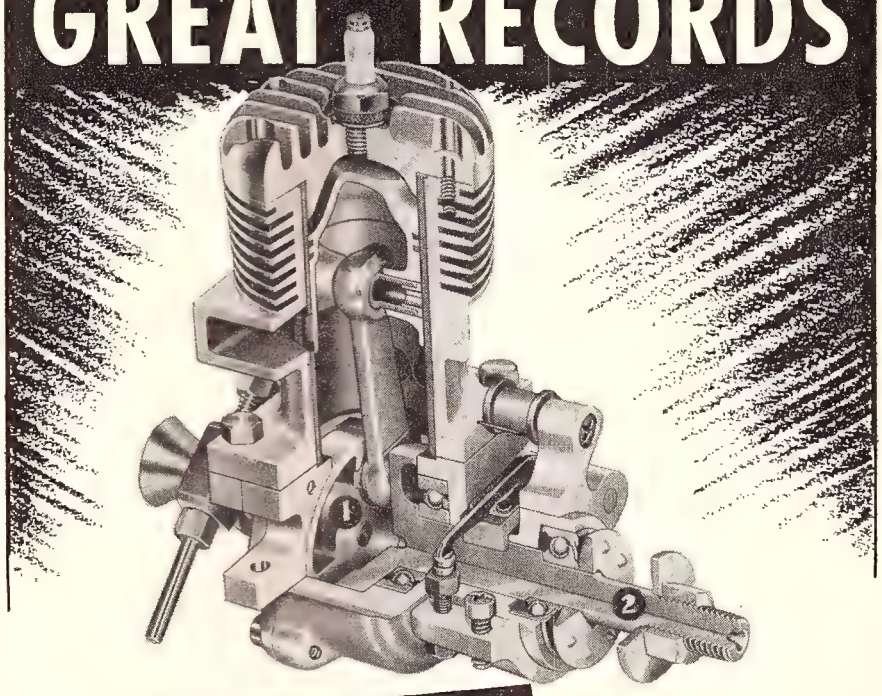
5452 WEST ADAMS BLVD.
LOS ANGELES 16, CALIF.

Chart of Steel Music Wire
By Bill Decker

Music Wire Gauge No.	Decimal Diameter	Feet per 1 Pound
45	.180	11
44	.170	13
43	.162	14
42	.154	16
41	.146	17
40	.138	19
39	.130	22
38	.124	24
37	.118	26
36	.112	29
35	.106	32
34	.100	37
33	.095	41
32	.090	45
31	.085	52
30	.080	60
29	.075	66
28	.071	72
27	.067	81
26	.063	92
25	.059	105
24	055	121
23	.051	140
22	.049	156
21	.047	177
20	.045	182
19	.043	200
18	.041	223
17	.039	250
16	.037	274
15	.035	306
14	.033	350
13	.031	390
12	.029	440
11	.026	540
10	.024	636
9	.022	757
8	.120	917
7	.018	1136
6	.016	1428
5	.014	1886
4	.013	2170
3	.012	2560
2	.011	3033
1	.010	3700
1/0	.009	4545
2/0	.008	5714
3/0	.007	7462
4/0	.006	10204
5/0	.005	14705
6/0	.004	23433

Good Reasons For
GREAT RECORDS



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1. Disc type rotary valve.
2. Full ball-bearing crank shaft of drop-forged chrome molybdenum steel, heat treated and ground between centers for true concentricity of all bearing journals.
- Guaranteed 90 days against defective workmanship and part breakage.
- Only engine to develop .85 horsepower at 14,000 r.p.m.

Still at pre-war prices, complete except for coil condenser and spark plug.

$35.00 MODEL "60-A"

for guide line or free-flying planes. Model "60-B" for boats. Model "60-RC" for race cars.

These are a few of many HORNET records:

- New Spur Gear Record, Waukegan, Ill., Sept. 1, John Crossan, V car Hornet powered, 118.27; Dale Martel, Proto Hornet powered, 113.21; Loose Memorial, Fred Luning, Spur Gear Hornet powered, 118.73.

- Speed Boats: Joe May, Detroit, Mich., July 4-6, 1946, new world record in Class D and E, speed 65.53 m.p.h., winning Gar Wood trophy and Model Craftsman plaque.

If your local hobby dealer does not have HORNET motors in stock, we will ship direct from factory within 24 hours of receipt of order.

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FRESNO, CALIFORNIA

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RECORD BREAKING

"Hornet"

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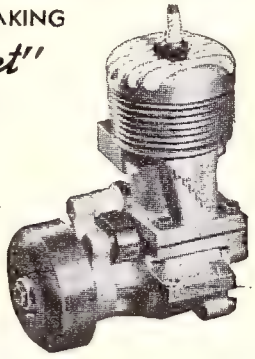

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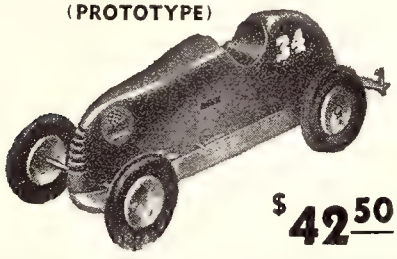

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The famous all Ball Bearing McCoy. The Super Streamliner for Super Speeds.

NEWS!!! The McCoy Racing Engine available for immediate delivery $35.00

PARTS ANNOUNCEMENT!!! As before the war, we are again stocking a most complete line of Wheels, Tires and Parts for the popular cars and engines.

RAILROAD FLASH!

DEALERS: Write today and operate an outstanding and profitable rail department. We carry complete lines of "O" and "HO" Kits from Picard, Varney, Mantua, A-C, Skyline, Ideal, Lehigh, Tru-Scale, Pittman, Starline and Pioneer.

Racing Hydroplanes in Many Types Are Available Again!

DEALERS: Write, wire or phone us today for these items or any other popular Hobbycraft Needs.

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Model Airplane and Hobbies

3111 W. 63rd St. CHICAGO, ILL.

Tulsa Miniature Speedway built by Model Motors, Inc., of Tulsa, Oklahoma. Track is located at No. Lewis at Mohawk Blvd.

MORE DOPE ON TRACKS

THIS month, we pass along more information on various tracks located throughout the country. Let's hear from more of you clubs and individuals, too. This is one way we can all help promote the hobby and keep the other fellow posted as to what the clubs are doing.

BOSTON M.R.C.C. Their track is located in Marshfield, Mass., which is south of Boston toward Cape Cod. The track is 70 ft. in diameter with concrete running surface and grass infield. An adequate crash wall is installed but the boys are planning to build a new wall in the spring to be even more protective. An electric eye is used in conjunction with a 100th second standard electric timer. The track has been in operation for four seasons and is very fast, speeds in excess of 116 MPH being turned this past year. Adequate facilities are available at the track, with plenty of shade for summer racing days. Facilities are open to all Boston MRCC members and visitors wishing to run. Full information can be obtained from Stanley W. Prussian, 75 Willard Rd., Brookline, Mass.

HARTFORD CITY M.R.C.C. A new 70 foot track is being planned for this coming season, but here's the dope on their present set-up. Cable track of 70 foot diameter, located in Sigma Phi Gamma Founders Park, Hartford City, Ind. At present, a mechanical timing device is used, although they plan to have an electrical relay timer. Starting motor is a ½ H.P. job, with V-pulley on one end and wooden drum on the other. Eighty feet of bench space is available, 1½ ft. wide constructed of masonite and angle iron. Track has a running surface of about two feet with an inside strip for "horsing."

Regarding their club, officers are elected every three months. They have approximately 15 active members and 85 associate or non-participating members. The latter have all privileges of the track but have no power to vote at their bi-monthly meetings, paying less in dues than the regular members. For information, contact Stephen Simmons, 320 N. High St., Hartford City, Ind.

MIGHTY MIDGETS. Some of these boys need no introduction to you old-timers who will recall the rail track which used to be located in Reading, Pa., before the war. A new club has now been formed, the Mighty Midgets, and regular club meets are being run every Sunday afternoon on a cement tennis court. Not too much effort has been made to get a good circle track since the boys have a

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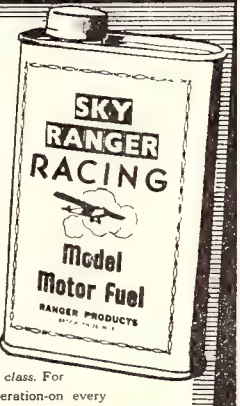
IT'S TERRIFIC!!



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It's the 10% that counts—10% added power to push your plane into the *WIN* class. For cleaner, cooler, easier operation-on every point that counts, *choose RANGER RACING FUEL.*

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PLANES—RACE CARS—BOATS TRAINS

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Absolutely

NON-SPILL!

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lead for another rail track. Should their plans go as well as expected, they are looking forward to the '47 Rail Regionals again being held in Reading.

The Mighty Midgets will welcome any fan to join them on any Sunday afternoon to run or just to come around and meet the gang. They can be found under the Lindberg Viaduct on Route 422, S. E. section of Reading, Pa. Weekly meetings are held each Tuesday at Waldman's Amusement Center, 6th & Pine Sts. Contact Calvin Lieb, Jr., 1334 Birch St., Reading, Pa.

PORTSMOUTH, VA. Who said there wasn't a Santa Claus? We take our hats off to A. H. (*Dinks*) Haynes, of Portsmouth, Va., who decided the only way to make his townspeople model race car conscious was to do something about it. And do something he did, starting the first Hobby Shop in that large city and further building a concrete cable track, all from his own pocket! It's a 26'3" track, of reinforced concrete and perfect finish, a real honey! (*The boys running on this track all appreciate it, Dinks. . . . Ed.*)

A New Year's Day race was planned but weather intervened. The meet was run off on Jan. 4th with seven cars running, not bad for a beginning! Contact M. F. Beazley, 1705 Holladay St., Apt. 5, Portsmouth, Va., for further information. All newcomers and veterans in this neighborhood are more than welcome and are urged to come join the ranks!

NEW OFFICERS INSTALLED AT VALLEY M. R. C. A.

By W. LLOYD BAAB

THE Valley Miniature Race Car Association of Ontario, Calif., recently held its annual election, again electing Wilmer T. White as their president for a third consecutive term. The Ontario boys have chosen wisely, as White has accomplished great things for the Club and IMRCA who have also given him a sec-

(*Continued on page 49*)

SUPER-SONIC GEARS

Babcock design **Super-Sonic Gears** hold all world speed records. **Super-Sonic Gears** are made of finest alloys—super-finished—freest running gears made.

Bevel gears have hub inside ring gear, pinion gear and drive shaft one solid piece, minimum overhang on pinion bearing designed for race cars. Ratio 1.9 to 1. Price per set $12.50.

SPUR GEAR matched, high precision, free running design, special pitch, highest RPM. 1⅜" center distance. Ratio 1.75 to 1. Price per set, $6.00.

Immediate delivery—at your dealer—or write to
SUPER-SONIC ENGINEERING CO.
629 Bryant Street, San Francisco 7

FOR SALE

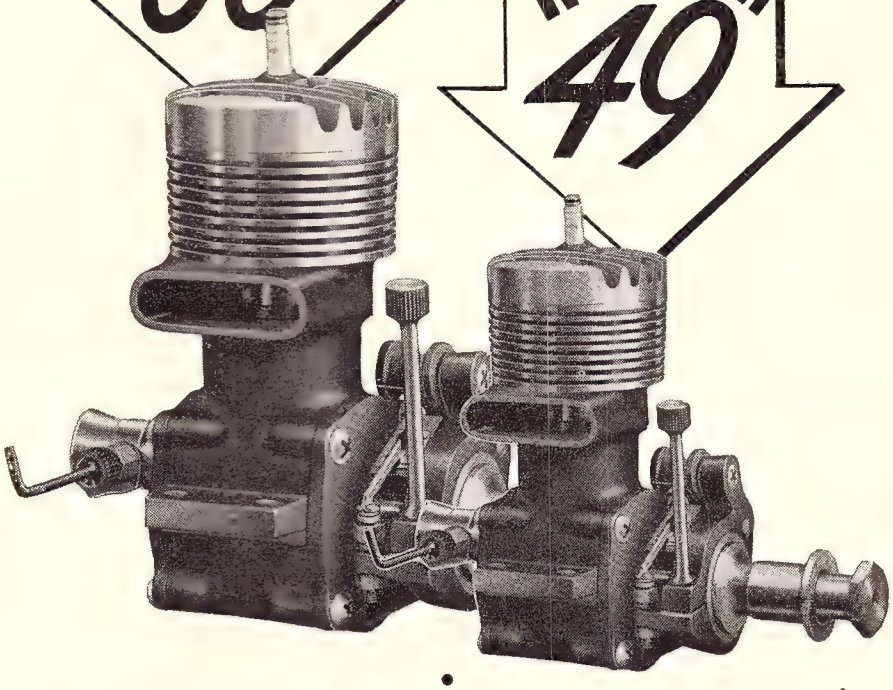
Two Model Race Cars, equipped to run on rail track.
12B-Richter Streamliner, with spare pan casting and front axle.
12C-Thompson Special Conventional, with spare frame casting and rear axle casting.
Both cars have been champions on Mid-West Rail tracks, won number of trophies. See back issues of M. C. for record.
Will sell both for $275.00 or separate at $150.00 each.

JAMES T. THOMPSON
1922 S. 61st Court Cicero 50, Illinois

DURO-MATIC McCOY

SUPER "60"

"49"



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A powerful performer in all events, the McCoy RED HEAD is precision built for record-making racing on land, water and in the air..**$35**

Sensational for U-control racing

Red Head, Jr.

The McCoy RED HEAD, JR. is the husky "little brother" of the RED HEAD "60," built to the same standards of quality and design. For U-control, free flight and precision flying.....**$25**

OTHER GREAT Checkered Flag PERFORMERS

Hot Rod Prototype of California's famous roadster racing car.

McCOY World's champion racing car-official time: 118.73 mph.

Invader A prototype with speed to match its racing lines.

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HOLLYWOOD 38, CALIFORNIA

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OK Engines

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THE FIRST, THE ONLY "B" ENGINE WITH 2 SPEED TIMER
CLASS "B"
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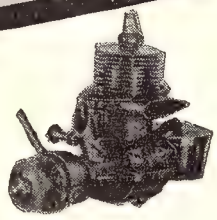
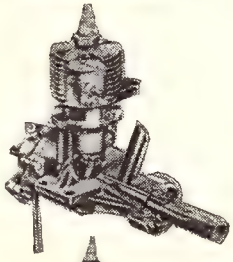
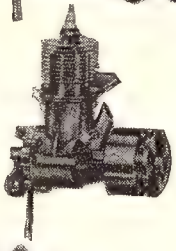


'OK' SUPER 60
CLASS "C"
$18.00



'OK' 60
Raceway-Marine
"Keywayed" Crankshaft and Flywheel
CLASS "C"
$23.00



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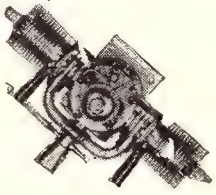
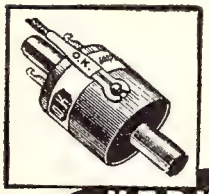
RADIO CONTROL
1st PRIZE
N.Y. MIRROR
$49.00





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Specify "OK" Pack with "OK" Engine (not included in Engine price). For Single Cylinder Engine—"OK" Coil, Condenser and flexible, multi-strand, high-tension lead . . . $3.00
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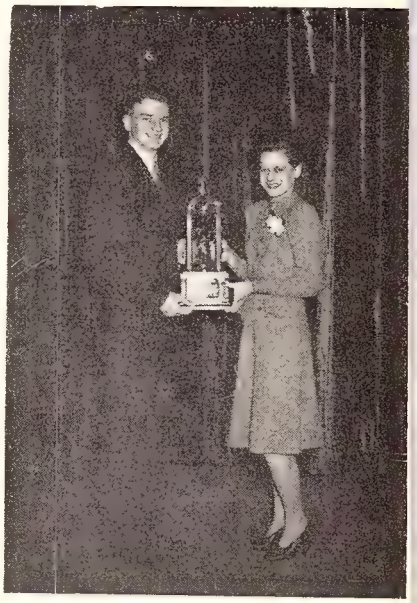
Annual banquet of the American Air Lines Gas Model Club, Cleveland, Ohio. Left—H. D. McCall, organizer and Club. Treas.; Leo Dixon, Chairman Cleveland Council of Model Aeronautics; Cleveland Representative of American Air Lines; John Grega, Club Pres.; Mrs. Herbert Nactz, Pres. Cleveland Womans Chapter of N.A.A.C.

NORRIS AGAIN CHAMPION AT CLEVELAND CLUB

THE American Air Lines Gas Model Club of Cleveland, Ohio, climaxed their 1946 activity with the awarding of Championship Trophies at a banquet held January 11th at the Hotel Carter. For the fourth consecutive season, Jack Norris of Lakewood, Ohio, was voted as Club Champion, receiving the Frank Kellogg Memorial Trophy, also a perpetual trophy which has marked the top American Airliner since the club's origin in 1938 and the Speed Champion Trophy. The Speed Trophy is a permanent award for collecting the most points in control-line contests during the year. The Kellogg Trophy is a new award started this year in memory of Frank Kellogg, former club member who was killed in service.

Other members honored with awards are: James Keppler, top high point champion of the Junior Division; William Mather and Louis Torno runners-up for championship honors.



Jack Norris being awarded the Frank Kellogg Memorial Trophy by Mrs. Peggy Ducharme, sister of Kellogg, during recent banquet at Cleveland, Ohio.

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"BLUE BLAZER"

The original miniature engine fuels.
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Chemically treated castor oils and alcohols.
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16 years of continuous testing
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Supercharged and fortified castor oils.
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61 official world records.
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E. M. P. B. C. HOLDS ANNUAL MEETING

By J. H. SPARR

THE Annual Meeting of the Eastern Model Power Boat Circuit was held in Philadelphia on January 25th, the Philadelphia Club acting as hosts, having made arrangements for a delicious dinner and business meeting which followed.

High Point Awards for the year 1946 were presented to the following: Class A: 1st—J. H. Sparr (Balto.); 2nd—B. Kaufman (Phila.); 3rd—T. Fuqua (Richmond). Class B: 1st—R. J. Buress (Balto.); 2nd—E. Kalfus (N. Y.); 3rd—H. Parohl (N. Y.). Class C: 1st—W. Trimmer (Richmond); 2nd—R. J. Buress (Balto.); 3rd—H. Trimmer (Richmond). Class D: 1st—H. Traband (Phila.); 2nd—E. Clapp (Phila.); 3rd—R. Seavey (Phila.).

New officers for the coming year were then elected: Chairman, J. H. Sparr; Secretary, B. J. George, Jr.; Treasurer, J. T. Sollers. All elected officers are from the Baltimore Model Power Boat Club, reason for this being the fact that officers can better handle the affairs of the circuit, living within the same city. This has always been the practice of E. M. P. B. C. in the past.

New revisions of the rules were also discussed and those wishing to obtain the latest set of rules may obtain them from the writer, 1021 Elm Ridge, Baltimore 29, Md.

Photo by Bob Graham

Eric Clapp, of Philadelphia, with his Class E boat which ran at 54.88 MPH at the N. Y. Model Power Boat Club race, Sept. 8, 1946. He won the Bob Graham Perpetual Trophy which he holds for one year; the medal he keeps. Prize awarded for High Speed in Class E (stock engine powered) at the N. Y. Club Sept. Race.

The following official speed records of the E. M. P. B. C. are listed:

	HOLDER — CLUB	MPH
Class A:	J. H. Sparr, Baltimore	49.56
Class B:	E. Kalfus, New York	68 plus
Class C:	W. Trimmer, Richmond	51.72
Class D:	H. Traband, Philadelphia	54.74
Class E:	E. Clapp, Philadelphia	54.88

POWERHOUSE

(Continued from page 8)

will be no *folding of wings* regardless of what happens.

The wing, stabilizer and rudder should always be covered with the grain of the paper running lengthwise. On the top and bottom of both the wing and stab where they rest on the body, use either two or three layers of paper. These sections will take a hard beating and need this additional strength.

Dope the entire plane with three coats of very thin clear dope and three coats of medium color dope which will keep any gas from soaking inside. A few words of caution—hard wood, plenty of cement, keep ship free of unwanted warps and do plenty of test flying. Get to know your motor thoroughly. The rest will come by itself!

NEW Liquid PLASTIC Makes 1001 OBJECTS

Hobbiests, art fans, craftsmen, home money-makers, here's a great discovery. Castolite, amazing new liquid plastic, gives beautiful effects never before possible. Now you can embed photos, flowers, coins, insects in clear liquid plastic and harden to any size or shape. Pours without heat. Use home tools: spoon, glass tumbler. Saw, drill, turn or carve. Make 1001 objects. Have pleasure; gain profit.

SPECIAL CASTO-KIT
Starts You at Home—$2.95

Start with instant use CASTO-KIT. Includes pound liquid Castolite, hardener, test tube, flower castings, buffing compound, measuring dropper, abrasives, complete instructions. Make useful objects first day. Send $2.95 plus 20c postage. Or order Shipped C.O.D. Or send 25c (stamps or coin) for illustrated instructions manual only.
The Castolite Co., Dept. B7, Box 211, Kenilworth, Illinois

NOW

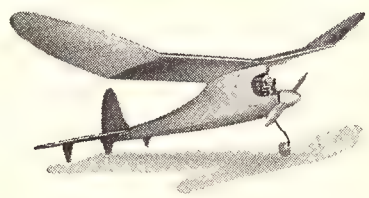
KORDA'S POWERHOUSE By BERKELEY

The Model That BROKE The World's Record TWICE In One Day!

Powered by a stock DeLong "30" engine, Dick Korda's "Powerhouse" turned in a sensational 35 min. 44 sec. flight, followed by a 21 min. 5 sec. out-of-sight second flight at the Michigan State Meet; setting new official records for single flight and for 3-flight average.

All over the country, Dick Korda has demonstrated and placed in contests against all comers with his sensational powerhouse.

The "Powerhouse" introduces a new technique in free-flight flying. It uses a small, high-pitch prop. It takes off at terrific speed and climbs at its most efficient angle, rather than hanging on its prop like old-fashioned contest designs.



Note the clean functional lines of the "Powerhouse." The clean nose accentuated by the massive Berkeley Spinner. The simple retracting landing gear. The efficient polyhedral landing gear. The rugged constructed fuselage. The entire model is structurally engineered.

KORDA "B" POWERHOUSE

56-inch WINGSPAN—FOR .29 to .49 ENGINES
511 sq. in. WING AREA—Weighs 36 oz.

This Berkeley gas model construction Kit is the finest, most complete ever produced. Full size detailed plans with step-by-step instructions; die-cut plywood posts; accurate cut and selected wood; balsa parts printed out; Silkspan covering; Hardware; Wheels; Cement; Ready-made retracting landing gear parts; and featuring:

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DICK KORDA

International Wakefield Rubber Model Champion, National Towline Glider Champion, and Class "B" GAS Model Record Holder. A respected designer and contest sport has joined Berkeley's staff of championship free-lance designers.

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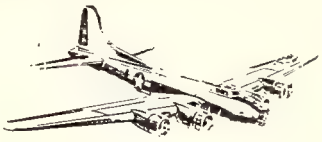

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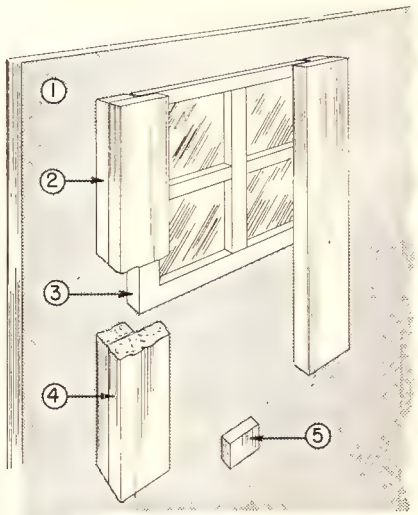
WINDOW frames and sills, mounted on your model buildings as illustrated, will add considerably toward a realistic model. Cement the piece of material removed from the window opening to a piece of stiff cardboard. After this window opening section has dried, carefully cut it out leaving an opening in the cardboard the same size as the window opening. Now cut out this opening, leaving about a 1/16" edge of material. You now have a pasteboard frame on which to paste your window material. Apply window material and allow to dry, then



1. WALL OF BUILDING
2. CARDBOARD STRIPS PASTED TO WALL
3. WINDOW FRAME
4. CARDBOARD STRIPS PASTED TO NO. 2.
5. WINDOW STOP

place window over opening in building wall and cement two cardboard strips, one along each side of the window frame. Make certain to allow room for the window to slide back and forth. Be careful not to cement the window and frame to the strips or wall.

Once the strips have dried in position, place window between strips and test for sliding. When properly fitted, cement another overlapping strip on top of each strip already in place, holding your window in its "track." A small block may be placed wherever necessary to prevent window from being pushed out of its orbit. . . . *Wm. E. Danneman.*

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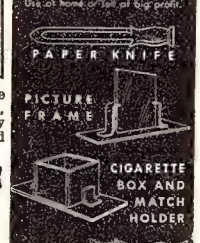

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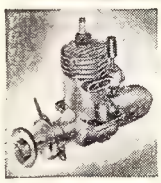

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ALONG THE TINPLATE TRACK

(*Continued from page 24*)

in a catalog, only to have the catalog of some other make turn up with an illustration appearing equally the same.

So many iron trains were made and sold at one period that manufacturers had to make up repeated sets of patterns, often times differing in details. An incident is recalled when once it was felt a clue had been found identifying one make, namely, the fact that wheels were being mounted inside the truck frames on a certain cattle car. This theory was almost immediately exploded when it was found this particular manufacturer had also made a cattle car with the wheels *outside* the truck frames. The position of the wheels then, could hardly be considered any sort of hard and fast rule for identifying his products.

From some catalogs, a few items seem to be more or less definitely identified. But, as will be pointed out, these clues are no more positive in all cases than was the incident of the cattle car wheels. As a starter toward identifying some of the old iron passenger cars, however, here is the nucleus of a list compiled from a limited number of manufacturers' catalogs which have been available:

Grey Iron: "Broadway Limited" series: Combination, "Overbrook, 704"; Observation, "706, Corinthian 706" (also a 705 coach in this series). "Keystone Express" series: Combination, "Celtic, 604"; Coach, "605, Ivanhoe, 605"; Observation, "606, Hypatia, 606."

"Overland Limited" series: Coach, "506, Ionic, 506"; Observation, "507, Doric, 507." "Pennsylvania Limited" series: Combination, "Crescent, 405"; Coach, "406, Belmont, 406"; Observation, "407, Woodbine, 407." There are also smaller series, one with coach "402" and observation "403," and a still smaller one with coach "300" and observation "301," as well as an unlettered series.

Hubley: Coach, "1919"; Observation, "1919"; Coach, "1910"; Coach and Observation, "333, Normandie, 333"; Coach and Observation, "America"; Coach and Observation, "23, Skidoo, 23"; Coach, "60, Eloise, 60"; Coach, "44, Narcissus, 44"; and a coach, "331, Normandie, 331."

But, and it is a big "BUT" serving to illustrate the complexity of the entire

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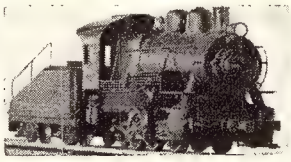
PENNSY SWITCH ENGINE

"S" GAUGE



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C & O Hopper Car ..... Jan. '46
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O GAUGE

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Realistic Tinplate Cars ..... Dec. '45, Jan. '46

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HO Trestle ..... Dec. '45
Simple Crossing Gate ..... Dec. '45
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V & T Passenger Station ..... July '46
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AIRPLANES

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"Super Bat", New Design (Shulman) ..... Apr. '46
"Thunderwin", U Control (McElwee) ..... May '46
The "Atomic", U Control (Shulman) ..... June '46
"Pigmy", Free Flight Class A (Marinelli) ..... July '46
"Pirate", Control Liner (McGovern) ..... Sept. '46
"Anzac", Class C Free Flight (McCoulough) ..... Oct. '46
Speed Indicator ..... Feb. '46
Down Thrust ..... May '46
Control Line Rules Editorial ..... July '46
Your Engines (Class A & B Survey) ..... Aug. '46
Your Engines (Class C Survey) ..... Sept. '46
Engine Maintenance & Operation ..... Sept. '46
Folding Props (Thomas) ..... Oct. '46
Victory Nationals (Wichita) ..... Oct. '46

ELECTRICAL ARTICLES

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Radio Control for Model Layouts ..... Dec. '44
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Home-Made Rheostats ..... June '45
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situation, a Shimer catalog also shows an almost identical coach lettered "44, Narcissus, 44"! Aside from very minor details which may be artist's touches, the main difference between the Shimer and Hubley cars is that the former is shown lettered "Pennsylvania RR" above the windows, while the Hubley car is lettered "Pennsylvania RR Co." in the same position.

Shimer, incidentally, seems to have favored Lehigh Valley lettering. Temporarily identified as their products are coaches lettered in full for this road and numbered "7," "50" and "601," with cars lettered "LVRR" and numbered "25," "50" and "60" as well as "LVRR" gondolas "57," "62" and "173." It is obvious, however, that future research may reveal a case of cars of another make being similarly lettered. The subject is an intricate one, and any attempts at identities should be approached with caution.

MORE NEW PRODUCTS

THE Hobby Lines Mfg. Co. has brought out two Wardie Jay Circus car kits designed particularly for Tinplaters. These kits, namely, a circus stock car and circus flat car, are similar in conception to the full scale length Wardie Jay kits, but build "shortie" cars which will negotiate tinplate curves. They are supplied without trucks or couplers, so tinplaters may fit them with the type used on their own layouts. The flat car is sufficiently long to hold two typical circus wagons. These are the first circus cars for Tinplaters since the old Ives Railway Circus of 1928-30.

The Wardie Jay Circus people state that they are anxious to help bridge the gap between tinplate and scale, and to make equipment for both types of model railroading without discrimination. This is another indication of a very promising trend among progressive manufacturers today in bringing about a situation which cannot help but have a salutary effect upon the entire hobby.

Standard gaugers will welcome the news that Park Railways, St. Louis Park, Minn., are bringing out conversion kits and parts for 3/8" scale, 2 1/8" gauge, including a kit for a 4-6-4 Hudson. This is the first new Standard gauge equipment brought out for a decade. Freight car and caboose underframe and truck kits are also included in the line. Castings are of brass and aluminum.

TORONTO LIVE STEAM

(*Continued from page 31*)

expansion and contraction, the ties are free to move a total of 1" sideways, the total expansion or contraction of the track thus being compensated by the shifting of the ties on the curves.

There is a 25' 6" bridge over the depression in the track area and this is the result of the design and gift of our President, Mr. R. Henham. We have had a total weight on this bridge upwards to 2000 pounds with no apparent weakness.

In order to accommodate passenger cars built on the saddle principle, a unique switch was developed by Mr. Drew to enable the locomotive and passenger car to be shunted from the main line to the spur and roundhouse.

From the surveying of the property until the first train made a complete circuit of the track, approximately 1700 man hours of time were put in by 40 to 50 of the 110 members of the society. There is ample room for an extension to the track of an additional approximate 500 ft., which might be possible within a year or two. In the immediate future, we have hopes of making a model power boat pond in the creek running along the track.

The approximate cost of the raw material was $500 to which all members contributed in one form or another. The minimum radius of the track is 42' 8" and the maximum 65'.

As secretary, I would be more than glad to hear from any readers who might live in the vicinity of Toronto and could come and visit our track. Please write me at 38 Grenview Blvd., Toronto 9, or phone Junction 9411. . . . *W. F. Choat.*

The Finest Models You've Ever Made!

The New Line of

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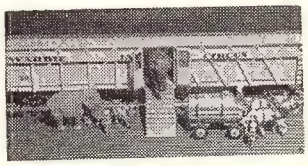

IMPORTANT NOTICE!

We have just taken over the assets of the Fabricated Products Corp., makers of the "Bathgate" Circus Kits—and are in the process of making changes in the models.

Every kit comes complete with easily understandable instructions, cast metal wagon sides with all the fancy scroll work, cast metal 16 spoke circus wheels, high grade basswood construction with paneling in front and rear, movable front axle undergear, etc.

Everyone who has ever built a Railroad Car will be fascinated with the idea of building a line of circus wagons. Two of these wagons can ride on the flat car. If you haven't a flat car (or Stock Car) and wish to own one, kits for them cost $2.95 for Stock Car—$1.50 for Flat Car.

Our line of Circus Wagons is already a big one—Water Tank Wagons, Cage Wagons, Ticket Wagons, Stake and Chain Wagons, Pole Wagons, Canvas Wagons, Commissary Wagons, etc. In addition, we have a complete line of Animals, Horses, Drivers, Clowns, etc. If your dealer can't supply you, place your order direct with us. Send for our illustrated Catalogue for only 25c.

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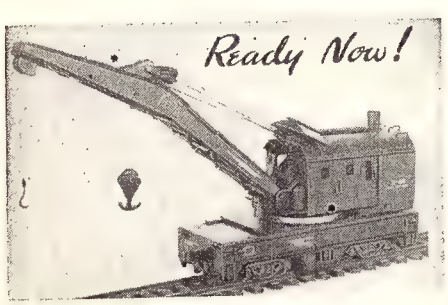

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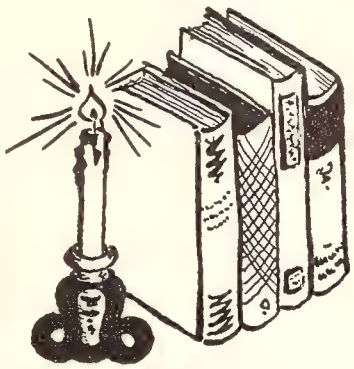

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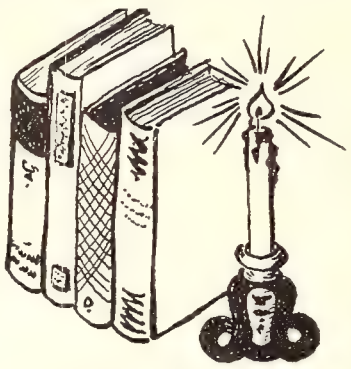
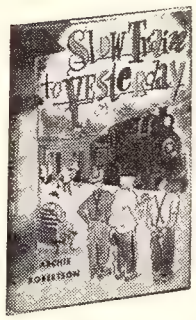


for technical knowledge, historical fact or real entertainment read the cream of model hobby books, listed below.

Don't Miss Them



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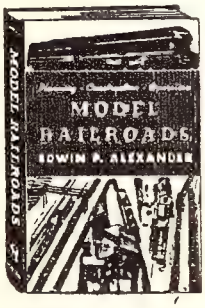

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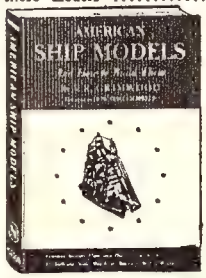

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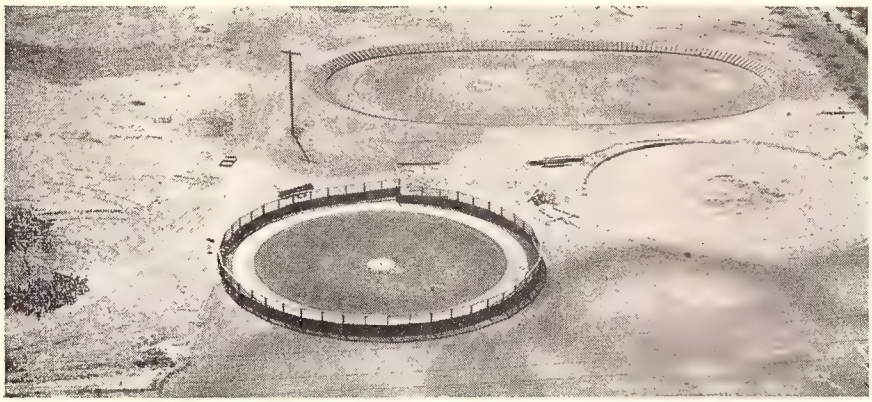

Aerial view of the Hornet Proving Ground. In the background is the partially completed rail track. Front left shows the completed cable track, with a similar track under construction at the right.

INSIDE DOPE ON HORNET'S PROVING GROUND

CONCEPTION of the Hornet Proving Grounds was based on a need for a Cable, Rail Track, Boat Pond and U-Control Course for Fresno, Calif., which is really the birth place of Model Car Racing. Since the first race held on March 26th, 1939, in the old Fresno Auditorium, there has been three tracks built and condemned because of the noise nuisance and rented property difficulties. Fresno was without Cable Track facilities for two years during the war, consequently interest was lost and it appeared as if the local club could not afford to buy property. Hornet Motor Manufacturing Co., owned by Ray Snow, Sr. & Jr. (*who incidentally, are not in this business solely for the dough angle*) decided to relocate their factory and at the same time acquire sufficient property to construct a proving ground for their products. Upon the completion of the project which is now about 60% completed, the public will be most welcome to use it at any time, regardless of whether they belong to the AMRCA or IMRCA. The question of which rules will be followed will be determined by a vote of the contestants before the race begins.

There have been many in agreement with a plan to hold point system races at Fresno, allowing other clubs in other cities to the north and south of Fresno to sponsor a race in 1947. Due to the geographical location of Fresno, this makes an ideal set-up, as San Francisco and other Clubs north can compete with the Clubs south, such as Torrance, San Diego and Ontario, making the driving distance about the same for all out-of-town contestants. At the time of the regionals, the Champions can be determined and really nice trophies given away, down to 40th spot if necessary.

For the information of those interested in building any or all types of model Boat Ponds or Race Car Tracks, the Hornet Motor Mfg. Co. is offering complete drawings of construction details for $1.00 per set, this covering cost of printing and mailing. The drawings were originally offered *Free*, but the demand has been so great that costs would run entirely too high. The prints were not complete enough for the average layman, making it necessary to redraw the details and make up new prints which are now available.

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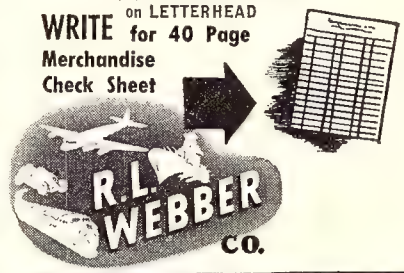

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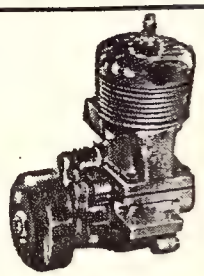

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Close-up shot of the 1/24th mile cable track at Waukegan, Ill.

VALLEY M. R. C. A.

(*Continued from page 39*)

ond term as president. Other Valley Officers follow: Vice-Pres., Clarence Benskin; Sec.-Treas., E. D. Hopkins; Club Directors, Nick Carter, Roy Torrey, M. Burdick, Don Shawver, and Ted Lessley, Sr.

The Valley Club is planning to resurface the existing track located in John Galvin Park within the city limits of Ontario. The following are results of the last club race in 1946:

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	MPH
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2. Roy Torrey	107.52
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3. A. W. Smith	101.01
4. H. Rosenberg	97.61
5. Don Shawver	96.35
6. A. Murman	92.68
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8. Jim Burdick	90.81
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VARNEY

R. R. CLUB NEWS

(*Continued from page 6*)

every Monday at 8 P.M. Club is open to receive a very limited number of new members (O-Gauge). If interested, contact the Secretary at 456 Kneeland Ave., Yonkers, N.Y.

WESTFIELD, N. J. The Central Jersey Model Railroad Association, 135 Elm St., held their annual election of officers at their January meeting: G. F. Weinheimer, Sr., President; L. B. Wilcox, Treasurer; Wm. Belmer, Secretary. Their treasurer's report showed an improved financial condition (sounds good!).

Plans have been drawn, after a pooling of suggested ideas and layouts, for additional tracks in the "shop" yard for freight and increased trackage at "Jersey City" freight yard for improved operation, work to start in the near future.

Third Monday night of each month is being devoted to time table operation with members taking turns performing the various operating tasks. In this way, all members have the opportunity to work the various positions and become familiar with operating the entire system. Visitors are welcome on operating nights, the other Mondays being devoted to business meetings and work evenings.

Their annual exhibition of the club layout is being held April 25, 26, 27, May 2, 3, 4, 9, 10 & 11, Friday evenings from 7 to 10 P.M., Saturday from 2 to 10 P.M. and Sunday from 2 to 6 P.M.

NEWBURGH, N. Y. The Newburgh Society of Model Railroad Engineers is preparing to celebrate their 1st Anniversary some time in March. Their club is in HO, operating in a 2-car garage located at 46 City Terrace just behind "Signland". They now operate over 200 feet of track with both a Main Line and Mountain Division. Seven pieces of motive power and a roster of 10 passenger coaches and 60 freight cars make up their rolling stock. The boys from the Kingston Club very generously cooperated with them in clearing up technicalities regarding their operating.

Besides drawing members from Newburgh, interested parties are coming from Poughkeepsie and Beacon, N. Y.

HUTCHINSON, KANSAS. Real misfortune descended on the Hutchinson Model Railroad Club, when their Club Layout was burglarized on or about January 12th. Considerable equipment was lifted, including many hand-built locos and cars, a severe loss to not only the club but to their individual members as well.

It is difficult to say in words how badly all of us feel about such a foul act as this. How anyone can stoop so low as to purposely rob such items and remove the opportunity for individuals to pursue their hobby is beyond the thought of decency. A printed list of those items taken have been distributed by the Hutchinson Club. We ask the wholehearted cooperation of everyone to help bring these culprits to justice.

WASHINGTON, D. C. The Fourteenth Annual Railroad Exhibit of the Metropolitan Society of Model Engineers will be on view from May 18th through May 31st at the Translux Building, 14th St. NW, near New York Ave. Judging from past experience, the exhibit will be well worth the time and effort involved in seeing it. Good luck, fellas!

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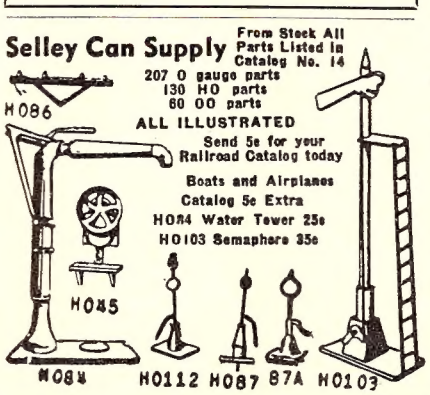

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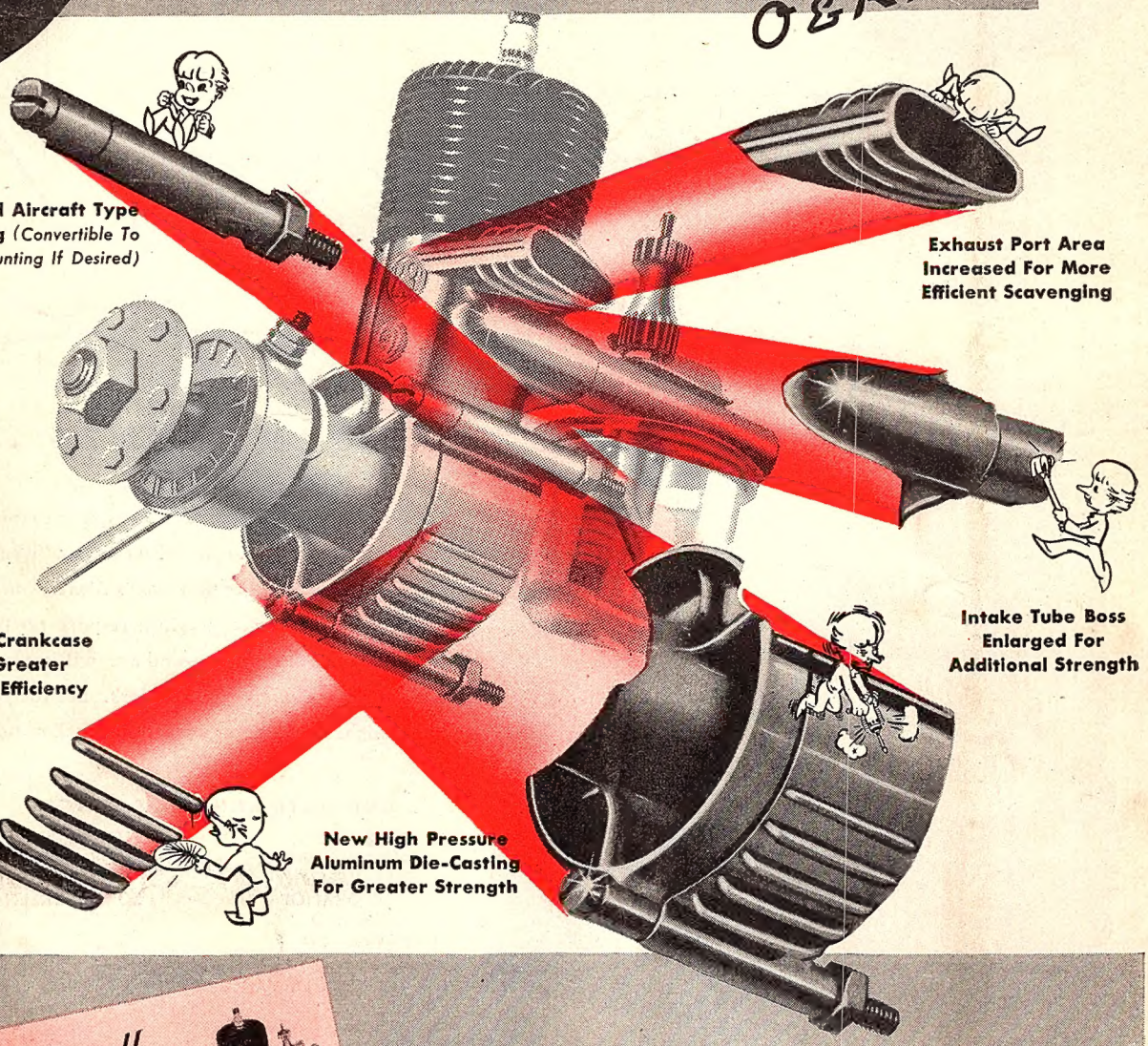

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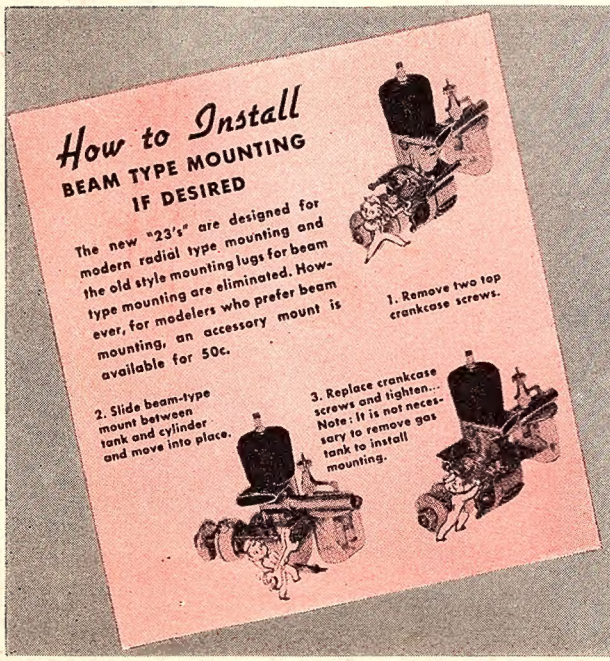
How to Install
BEAM TYPE MOUNTING
IF DESIRED
The new "23's" are designed for modern radial type mounting and the old style mounting lugs for beam type mounting are eliminated. However, for modelers who prefer beam mounting, an accessory mount is available for 50c.
1. Remove two top crankcase screws.
2. Slide beam-type mount between tank and cylinder and move into place.
3. Replace crankcase screws and tighten... Note: It is not necessary to remove gas tank to install mounting.

Rumored for many weeks has been the introduction of an improved O & R 23 for 1947. These new engines are now available at your dealer's, featuring famous "23" design, lapped piston and cylinder, one-piece microbalanced crankshaft, ball-bearing thrust bearing, and enclosed timer *plus* the features noted above. Add a new "23" to your model equipment and keep ahead in '47.

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